

Fig. 1: Verification of differential expression of HIF3alpha splice variant 1 by quantitative RT-PCR

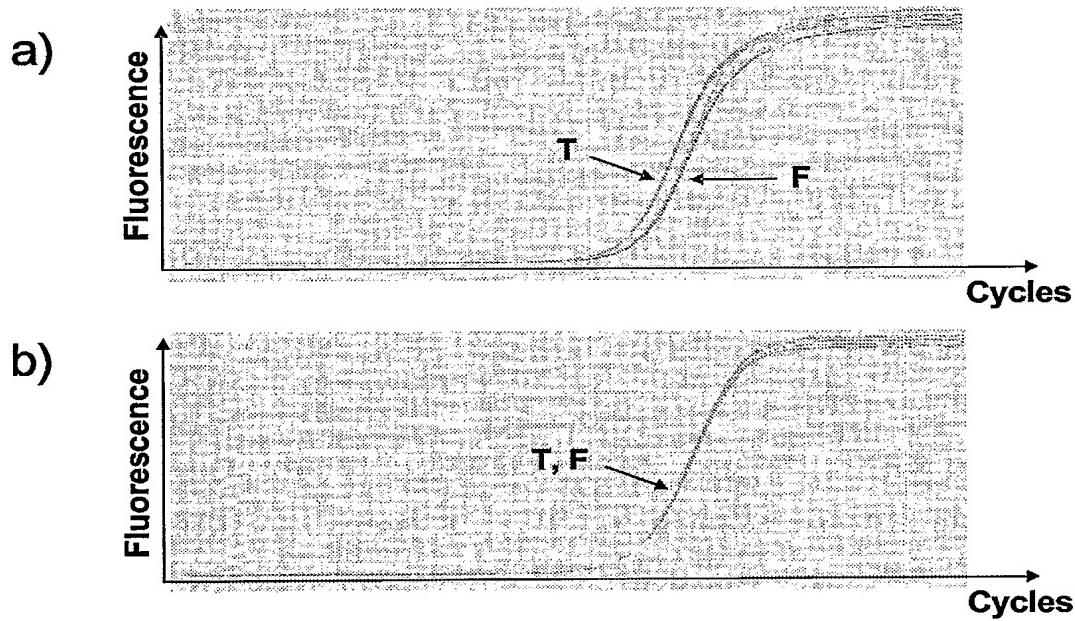
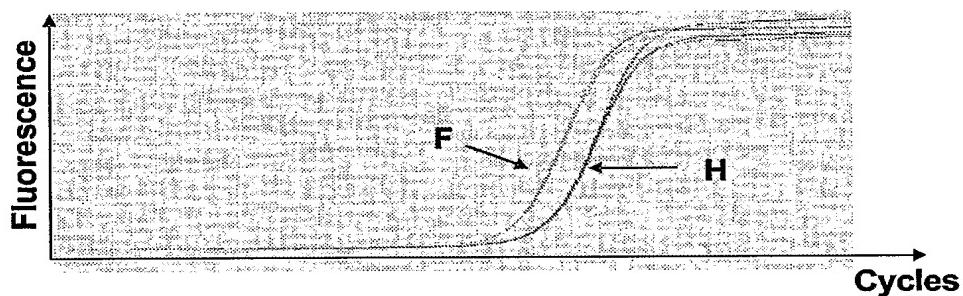


Fig. 2: Verification of differential expression of HIF3alpha splice variant 1 by quantitative RT-PCR

a)



b)

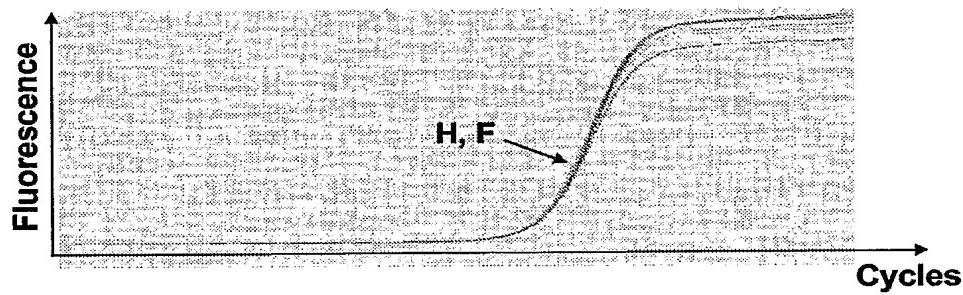


Fig. 3: Verification of differential expression of HIF3alpha splice variant 2 by quantitative RT-PCR

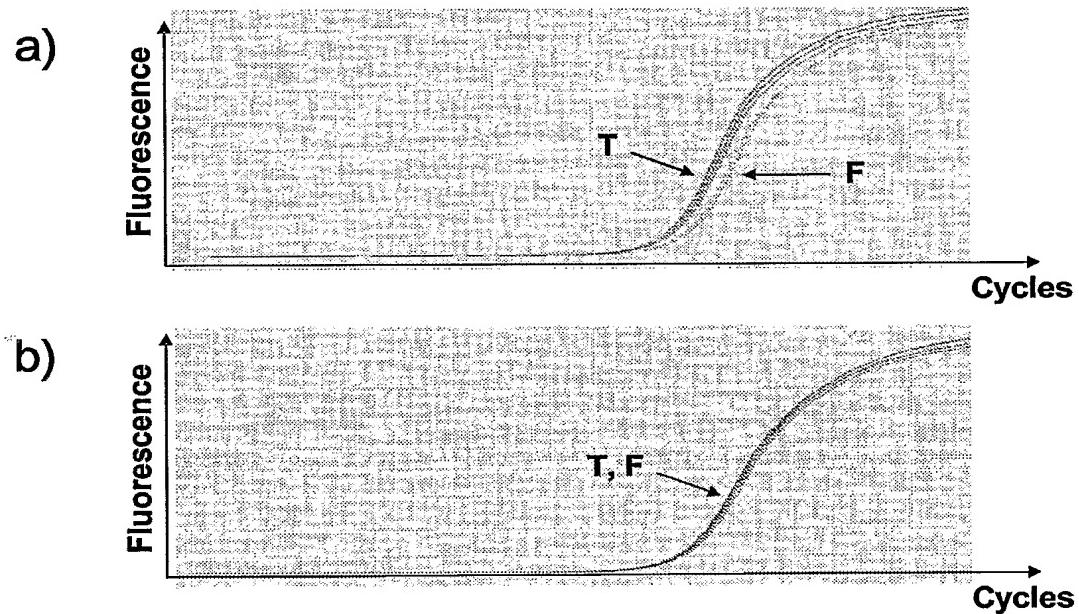


Fig. 4: Verification of differential expression of HIF3alpha splice variant 3 by quantitative RT-PCR

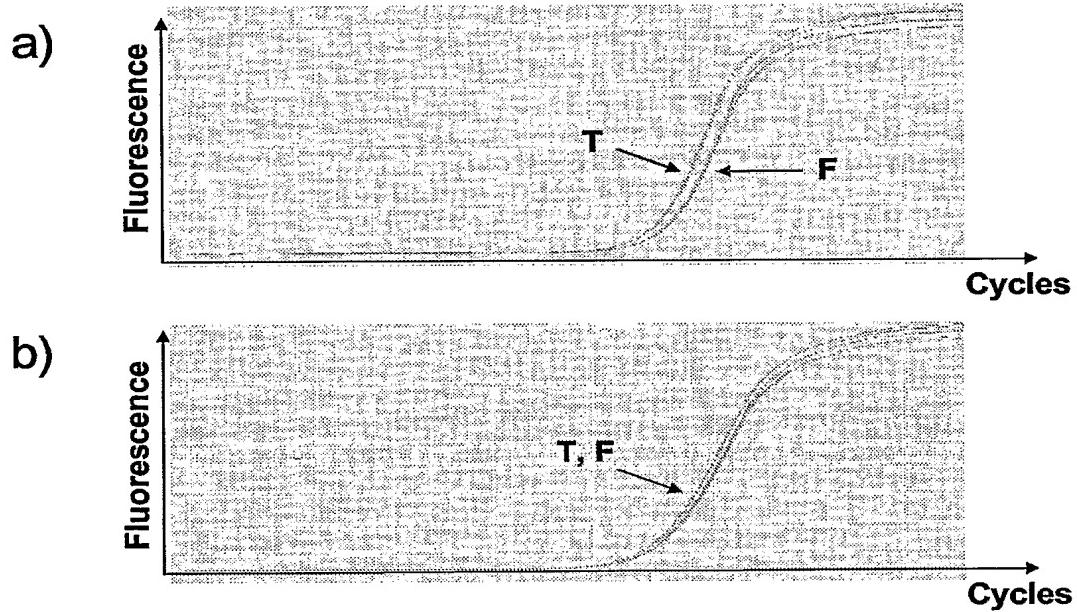


Fig. 5: Verification of differential expression of HIF3alpha splice variant 5 by quantitative RT-PCR

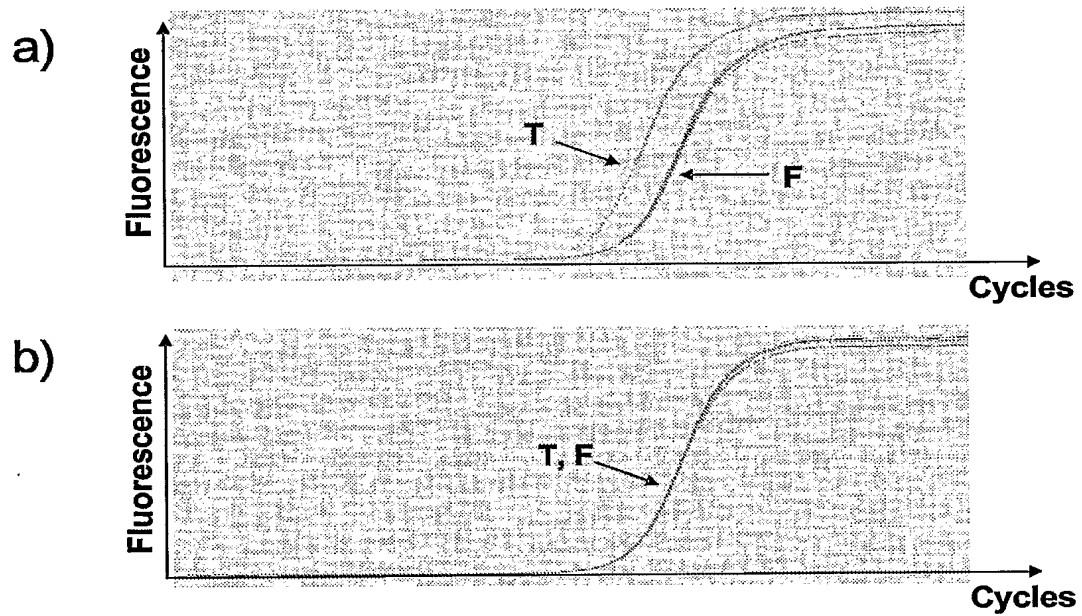


Fig. 6: SEQ ID NO. 1**Length: 289 bp**

```
1 CATTATGAG AGTTTATTCA TTCAAAACAT ATTTACTGTC GGGCGTGGTG
51 GTTCATACCA GTAATCCCAG CACTTGGGA GGCCAAGGCA GGTGGATCGC
101 TTGAACTCAG GAGTTCAAGA CCAGCCTGGG CAACATGGTG GAACTTCGTC
151 TCTACAAAAC ATATAAACAT CAGCCAGGCA TGATGGCACA TAGCTGCAGT
201 CCCAGCTACT TGTGGGAGCT GAAGTAGGAG GATCACTTGA GCCCAGGAGG
251 TCGAGGCTGT GGTGAGCTGT GTTTGTGCCA CTGCACTCC
```

**Fig. 7: Alignment of SEQ ID NO. 1
with human HIF3alpha splice variant sv1 cDNA,
SEQ ID NO. 6**

289 GGAGTGCAGTGGCACAAACACAGCTCACCAAGCCTCGACCTCCTGGGCT 240
||||| ||||| ||||| ||||| ||||| ||||| ||||| ||||| |||||
1421 GGAGTGCAGTGGCACAAACACAGCTCACCGCAGCCTCGACCTCCTGGGCT 1470

239 CAAGTGATCCTCCTACTTCAGCTCCCACAAGTAGCTGGGACTGCAGCTAT 190
||||| ||||| ||||| ||||| ||||| |||||
1471 CAAGTGATCCTCCTACTTCAGCTCCCACAAGTAGCTGGGACTGCAGCTAT 1520

189 GTGCCATCATGCCTGGCTGATGTTATATGTTTGAGAGACGAAGTTCC 140
||||| ||||| ||||| ||||| ||||| |||||
1521 GTGCCATCATGCCTGGCTGATGTTATATGTTTGAGAGACGAGGTTTC 1570

139 ACCATGTTGCCAGGCTGGTCTTGAACCTCCTGAGTTCAAGCGATCCACCT 90
||||| ||||| ||||| ||||| ||||| |||||
1571 ACCATGTTGCCAGGCTGGTCTTGAACCTCCTGAGTTCAAGCGATCCACCT 1620

89 GCCTTGGCCTCCAAAGTGTGGGATTACTGGTATGAACCACCACGCCCG 40
||||| ||||| ||||| ||||| |||||
1621 GCCTTGGCCTCCAAAGTGTGGGATTACTGGTATGAACCACCACGCCCG 1670

39 ACAGTAAATATGTTGAATGAATAACTCTCATAAATG 1
||||| ||||| |||||
1671 ACAGTAAATATGTTGAATGAATAACTCTCATAAATG 1709

**Figure 8: SEQ ID NO. 2:
amino acid sequence of
human HIF3alpha,
splice variant 1**

Length: 450 aa

```
1 MRPAAGAARR PRCCTS WLTR CSPAASAPT WTRPLSCASP SATCACTASA
51 PQLELIGHSI FDFIHPCDQE ELQDALTPQQ TLSRRKVEAP TERCFSLRMK
101 STLTSGRRTL NLKAATWKVL NCSGHMRAYK PPAQTSPAGS PDSEPLQCL
151 VLICEAIPHP GSLEPPLGRG AFLSRHSILDM KFTYCDDRIA EVAGYSPDDL
201 IIGCSAYEYIH ALDSDAVSKS IHTLLSKGQA VTGQYRFLAR SGGYLWTQTO
251 ATVVSGGRGP QSESIVCVHF LISQVEETGV VLSLEQTEQH SRRPIQRGAP
301 SQKDTPNPGD SLDTPGPRIL AFLHPPSLSE AALAAADPRRF CSPDLRRLLG
351 PILDGASVAA TPSTPLATRH PQSPLSADLP DELPVGTENV HRLFTSGKDT
401 EAVETDLDIA QDPSTPLLNL NEPLGFHFVT QSGVQWHKHS SPQPRPPGLK
```

**Fig. 9: SEQ ID NO. 3:
amino acid sequence of
human HIF3alpha,
splice variant 2**

Length: 342 aa

```
1  MALGLQRARS TTELRKKEKSR DAARSRRSQE TEVLYQLAHT LPFARGVSAH
 51 LDKASIMRLT ISYLRMHRLC AAGEWNQVGA GGEPLDACYL KALEGFVMVL
101 TAEGDMAYLS ENVSKHLGLS QLELIGHSIF DFIHPCDQEE LQDALTPQQT
151 LSRRKVEAPT ERCFSLRMKS TLTSRGRTILN LKAATWKVLN CSGHMRAYKP
201 PAQTSPAGSP DSEPPLQCLV LICEAIPHPG SLEPPLGRGA FLSRHSLDMK
251 FTYCDDRIAЕ VAGYSPDDLI GCSAYEYIHA LDSDAVSKSI HTLLSKGQAV
301 TGQYRFLARS GGYLWTQTQA TVVSGGRGPQ SESIVCVHFL IR
```

**Fig. 10: SEQ ID NO. 4:
amino acid sequence of
human HIF3alpha,
splice variant 3**

Length: 632 aa

```
1  MALGLQRARS TTTELRKESR DAARSRRSQE TEVLYQLAHT LPFARGVSAH
51  LDKASIMRLT ISYLRMHRLC AAGEWNQVGA GGEPLDACYL KALEGFVMVL
101 TAEGDMAYLS ENVSKHLGLS QLELIGHSIF DFIHPCDQEE LQDALTPQQT
151 LSRRKVEAPT ERCFSLRMKS TLTSRGRTLN LKAATWKVLLN CSGHMRAYKP
201 PAQTSPAGSP DSEPPLQCLV LICEAIIPHGP SLEPPLGRGA FLSRHSLDMK
251 FTYCDDRIA E VAGYSPDDLI GCSAYEYIHA LDSDAVSKSI HTLLSKGQAV
301 TGQYRFLARS GGYLWTQTQA TVVSGGRGPQ SESIVCVHFL ISQVEETGVV
351 LSLEQTEQHS RRPIQRGAPS QKDTPNPGDS LDTPGPRILA FLHPPSLSEA
401 ALAADP RRF C SPDLRRLLGP IILDGASVAAT PSTPLATRHP QSPLSADLPD
451 ELPVGTE NVH RLFTSGKDTE AVETDLDIAQ DADALDLEML APYISMDDDF
501 QLNASEQLPR AYHRPLGAVP RPRARSFHGL SPPALEPSLL PRWGSDPRLS
551 CSSPSRGDPS ASSPMAGARK RTLAQSSEDE DEGVELLGVR PPKRSPSPEH
601 ENFLLFPLSL VCWGINGILW PSLPSWLKPT VL
```

**Fig. 11: SEQ ID NO. 5:
amino acid sequence of
human HIF3alpha,
splice variant 5**

Length: 648 aa

```
1 MRLTISYLRM HRLCAAGEWN QVGAGGEPLD ACYLKALEGF VMVLTAEGDM
51 AYLSENVSKH LGSQLLELIG HSIFDFIHPC DQEELQDALT PQQTLSRRKV
101 EAPTERCFSL RMKSTLTSRG RTLNLKAAATW KVLCNGSHMR AYKPPAQTS
151 AGSPDSEPPPL QCLVLIICEAI PHPGSLEPPL GRGAFLSRHS LDMKFTYCDD
201 RIAEVAGYSP DLLIGCSAYE YIHALDSDAV SKSIHTLLSK GQAVTGQYRF
251 LARSGGYLWT QTQATVVSGG RGPQSESIVC VHFLISQVEE TGVVLSLEQT
301 EQHSRRPIQR GAPSQKDTPN PGDSLDTPGP RILAFHPPS LSEAALAADP
351 RRFCSPDLRR LLGPILDGAS VAATPSTPLA TRHPQSPLSA DLPDELPVGT
401 ENVHRLFTSG KDTEAVETDL DIAQDADALD LEMLAPYISM DDDFQLNASE
451 QLPRAYHRPL GAVPRPRARS FHGLSPPALE PSLLPRWGSD PRLSCSSPSR
501 GDPSASSPMA GARKRTLAQS SEDEDEGVEL LGVRPPKRSP SPEHENFLLF
551 PLSLSFLLTG GPAPGSLQDP TELTQFLLSV LSFPILDPYP LGCAAPGLHA
601 SPFSLPTISV PQNPLHFPPQ PSRHALTTLT PHMFGAPGAP SPLGWFAI
```

**Fig. 12: SEQ ID NO. 6:
nucleotide sequence of human HIF3alpha cDNA,
splice variant 1**

Length: 1709 bp

```
1 ACTCGTAACT CGCACCCGGG TCCTGGCTGC ACCGCATCCC CTCCCTGCACC
 51 CCCTGGATGG CCCTTCAGCC AACGGGGGCC TGGGCGATGG TCGACCACGG
101 AGCTCGCAA GGAAAAGTCC CGGGATGCCG CCCGCAGCCG GCGCAGCCAG
151 GAGACCGAGG TGCTGTACCA GCTGGCTCAC ACGCTGCCCT TCGCCCGCGG
201 CGTCAGCGCC CACCTGGACA AGGCCTCTAT CATGCGCCTC ACCATCAGCT
251 ACCTCGGCAT GCACCGCCTC TGCACCGCAG CTGGAGCTCA TTGGACACAG
301 CATCTTGAT TTCATCCACC CCTGTGACCA AGAGGGAGCTT CAGGACGCC
351 TGACCCCCCA GCAGACCCCTG TCCAGGAGGA AGGTGGAGGC CCCCACGGAG
401 CGGTGCTTCT CCTTGCGCAT GAAGAGTACA CTCACCAAGCC GCGGGCGCAC
451 CCTCAACCTC AAGGGCGGCCA CCTGGAAGGT GCTGAACCTGC TCTGGACATA
501 TGAGGGCCTA CAAGCCACCT GCGCAGACTT CTCCAGCTGG GAGCCCTGAC
551 TCAGAGCCCC CGCTGCAGTG CCTGGTGCCTC ATCTGCGAAG CCATCCCCA
601 CCCAGGCAGC CTGGAGCCCC CACTGGGCCG AGGGGCCTTC CTCAGGCC
651 ACAGCCTGGA CATGAAGTTC ACCTACTGTG ACGACAGGAT TGCAGAAAGTG
701 GCTGGCTATA GTCCCGATGA CCTGATCGGC TGTTCCGCCT ACGAGTACAT
751 CCACGCGCTG GACTCCGATG CGGTGACCAA GAGCATCCAC ACCTTGCTGA
801 GCAAGGGCCA GGCAGTAACA GGGCAGTATC GCTTCCTGGC CCGGAGTGGT
851 GGCTACCTGT GGACCCAGAC CCAGGCCACA GTGGTGTCA GGGGACGGGG
901 CCCCCCAGTCG GAGAGTATCG TCTGTGTCCA TTGTTTAATC AGCCAGGTGG
951 AAGAGACCCG AGTGGTGCTG TCCCTGGAGC AAACGGAGCA ACACTCTGC
1001 AGACCCATTG AGGGGGCGC CCCCTCTCAG AAGGACACCC CTAACCTGG
1051 GGACAGCCTT GACACCCCTG GCCCCCCGGAT CCTTGCCTTC CTGCACCCGC
1101 CTTCCCTGAG CGAGGCTGCC CTGGCCGCTG ACCCCCCGCCG TTTCTGCAGC
1151 CCTGACCTCC GTGCCCTCCT GGGACCCATC CTGGATGGGG CTTCAGTAGC
1201 AGCCACTCCC AGCACCCCGC TGGCCACACG GCACCCCCAA AGTCCTCTT
1251 CGGCTGATCT CCCAGATGAA CTACCTGTGG GCACCGAGAA TGTGCACAGA
1301 CTCTTCACCT CGGGAAAGA CACTGAGGCA GTGGAGACAG ATTTAGATAT
1351 AGCTCAGGAC CCCAGCACCC CACTCCTGAA CCTGAATGAG CCCCTGGGTT
1401 TTCACTTTGT CACCCAGTCT GGAGTGCAGT GGCACAAACA CAGCTCACCG
1451 CAGCCTCGAC CTCTGGGCT CAAGTGATCC TCCTACTTCA GCTCCCACAA
1501 GTAGCTGGGA CTGCAGCTAT GTGCCATCAT GCCTGGCTGA TGTTTATATG
1551 TTTTGTAGAG ACGAGGTTTC ACCATGTTGC CCAGGCTGGT CTTGAACCTC
1601 TGAGTTCAAG CGATCCACCT GCCTGGCCT CCCAAAGTGC TGGGATTACT
1651 GGTATGAACC ACCACGCCG ACAGTAAATA TGTTTGAAAT GAATAAACTC
1701 TCATAAAATG
```

Fig. 13: SEQ ID NO. 7:
nucleotide sequence of
human HIF3alpha cDNA,
splice variant 2

Length: 2239 bp

```

1 TGGGAGCCGC GACTGGCGAG CCATGGCGCT GGGGCTGCAG CGCGCAAGGT
51 CGACCAACCGA GCTGCGCAAG GAAAAGTCCC GGGATGCGGG CCGCAGCCGG
101 CGCAGCCAGG AGACCGAGGT GCTGTACCAG CTGGCTCAC A CGCTGCCCTT
151 CGCCCCGCGGC GTCAGCGCCC ACCTGGACAA GGCCTCTATC ATGCCCTCA
201 CCATCAGCTA CCTGCGCATG CACCGCCTCT GCGCCGCAGG GGAGTGGAAC
251 CAGGTGGGAG CAGGGGGAGA ACCACTGGAT GCCTGCTACC TGAAGGCCCT
301 GGAGGGCTTC GTCATGGTGC TCACCGCCGA GGGAGACATG GCTTACCTGT
351 CGGAGAAATGT CAGCAAACAC CTGGGCCTCA GTCAGCTGGA GCTCATTGGA
401 CACAGCATACT TTGATTTCAT CCACCCCTGT GACCAAGAGG AGCTTCAGGA
451 CGCCCTGACC CCCCAGCAGA CCCTGTCCAG GAGGAAGGTG GAGGCCCCCA
501 CGGAGCGGTG CTTCTCCTTG CGCATGAAGA GTACGCTCAC CAGCCGCGGG
551 CGCACCCCTCA ACCTCAAGGC GGCCACCTGG AAGGTGCTGA ACTGCTCTGG
601 ACATATGAGG GCCTACAAGC CACCTGCGCA GACTTCTCCA GCTGGGAGCC
651 CTGACTCAGA GCCCCCGCTG CAGTGCCTGG TGCTCATCTG CGAACGCCATC
701 CCCCCACCCAG GCAGCCTGGA GCCCCCACTG GGCGAGGGG CTTTCCTCAG
751 CCGCCACACG CTGGACATGA AGTTCACCTA CTGTGACGAC AGGATTGCAG
801 AAGTGGCTGG CTATAGTCCC GATGACCTGA TCGGCTGTT CGCCTACGAG
851 TACATCCACG CGCTGGACTC CGACGCGTC AGCAAGAGCA TCCACACCTT
901 GCTGAGCAAG GGCCAGGGAG TAACAGGGCA GTATCGCTTC CTGGCCCGGA
951 GTGGTGGCTA CCTGTGGACC CAGACCCAGG CCACAGTGGT GTCAGGGGGA
1001 CGGGGCCCCC AGTCGGAGAG TATCGTCTGT GTCCATT TTAATCAGGTA
1051 AGCAGGAGGA GGGGCTGGGG TGGCTGTGTG TGGGCGCTGAT CTGCATGTGT
1101 GGACAGGTGT GTGTGTGTGT GTGTGTGTGT GCGTATGAGC
1151 ATGCATGTGT ATCATGCATA AGTGTATGTG AGGGAGTGTG CACGTGTACA
1201 CATATGAGGA ATGTGTGTCA CCATGTAAAT GCCGGTGTGT GTGTCITGCAT
1251 GGACACAGGT ATGTGTATGG GTGTGTAGAC TGTTAATT TTTTTTTTTT
1301 TTTTTTGCG TGAACCTCTG CTTAAGTGGA TTGTTAATTC AAATTAGAAA
1351 GGGGTCTTTA TTTGGCCTGG CATGGTGGCT CATGCCTGTA ATCCCTAGCAC
1401 TTTGGGAGGC TGAGGTGGGC GGATTGCCCTG AGCTCAGGAG TTCGAAACCA
1451 GCCTGGGCAA CATGACGAAA TGCTGTTCT GCTAATAATA CCAAAATTA
1501 GCCGGGTGTG GTGACACATG CCTGTGATCC CAACTACTCG GGAGGCTGAG
1551 GCACGAGAAAT CATTAGAACCC CGGGTGGTGG AGGCTGCAGT GAGCCGAGAT
1601 TGCCTCAGTG CACTCTGGCC TCGGCAACAG AGCGAGACATC TGTCTCAAAC
1651 AAACAAACAA ACAACAAAAA GGACTCTATA TTCAAGTTAA AATAAGAAGT
1701 GTAACAGAAAT CATGGGTCT TTTTGCTTT TTAAATTG ATGTGGCTCA
1751 CGCCTGTAAA TCCCAAGGTG TTGGGATTAC AGGCGTGAGC CACTGCACCC
1801 GGCCCATGTT GTGGTTTATA TCAGTAGTTC CTTTGTAAAT AGTAAACAGT
1851 ATTCCATGGT ATGAATAGAG CACAGTTTT TTTTTATCC ATTCAACAGT
1901 TAGAACACAT TGGGCTGTTT CCAAGTTGG GTGATTACAA AAAACAGCTA
1951 CTGTAAACAT TCTCATACAA GATTTTATGA GATCACATGT TTTCATTTCT
2001 CTTGGGTAAA CAGCTAGGAT TGGAAATGGAT GGGTTATATA GTAAGTGTAT
2051 ATTTAATCTA AGAAACTGCC ATGGCTGGGC ACAGTGGCTC ACGCCTGTAA

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2101 TCCCCAGTACT TTGGGAAGCC AAGGAAGGAG GATGACTAGA GCCTCTGAGG
2151 TGAAGACCCAG CCTGGGCAAA GTGGTTAAGA CTCAACCGCA AAAAAAGAAA
2201 AACAGAAAAC CTGAAAACAA ACCAAAAAAA AAAAAAAA

Figure 14: SEQ ID NO. 8:
nucleotide sequence of
human HIF3alpha cDNA,
splice variant 3

Length: 2082 bp

```

1 GACTGGCGAG CCATGGCGCT GGGGCTGCAG CGCGCAAGGT CGACCACGGA
51 GCTGCGCAAG GAAAAGTCCC GGGATGCGGC CGCGAGCCGG CGCAGCCAGG
101 AGACCGAGGT GCTGTACCAAG CTGGCTCACAA CGCTGCCCTT CGCCCGCGGC
151 GTCAGCGGCC ACCTGGACAA GGCCCTATC ATGCGCCTCA CCATCAGCTA
201 CCTGCGCATG CACCGCCTCT GCGCCGCAGG GGAGTGGAAC CAGGTGGGAG
251 CAGGGGGAGA ACCACTGGAT GCCTGCTACC TGAAGGCCCT GGAGGGCTTC
301 GTCACTGGTGC TCACCGCCGA GGGAGACATG GCTTACCTGT CGGAGAACATGT
351 CAGCAAACAC CTGGGCCTCA GTCAGCTGGA GCTCATGGAA CACAGCATCT
401 TTGATTTCAT CCACCCCTGT GACCAAGAGG AGCTTCAGGA CGCCCTGACC
451 CCCCAGCAGA CCCCTGTCAG GAGGAAGGTG GAGGCCCTTA CGGAGCGGTG
501 CTTCTCCCTTG CGCATGAAGA GTACGCTCAC CAGCCGCAGG CGCACCCCTCA
551 ACCTCAAGGC GGCCACCTGG AAGGTGCTGA ACTGCTCTGG ACATATGAGG
601 GCCTACAAGC CACCTGCGCA GACTTCTCCA GCTGGGAGCC CTGACTCAGA
651 GCCCCCCTG CAGTGCCTGG TGCTCATCTG CGAAGCCATC CCCCACCCAG
701 GCAGCCTGGA GCCCCCACTG GGCGCAGGGG CCTTCCTCAG CCGCCACAGC
751 CTGGACATGA AGTCACCTA CTGTGACGAC AGGATTGCAG AAGTGGCTGG
801 CTATAGTCCC GATGACCTGA TCGGCTGTTG CGCCTACGAG TACATCCACG
851 CGCTGGACTC CGACGCGGTC AGCAAGAGCA TCCACACCTT GCTGAGCAAG
901 GGCCAGGGAG TAACAGGGCA GTATCGCTTC CTGGCCCGGA GTGGTGGCTA
951 CCTGTGGACC CAGACCCAGG CCACAGTGGT GTCAGGGGGA CGGGGCCCTC
1001 AGTCGGAGAG TATCGTCTGT GTCCATTGTT TAATCAGCCA GGTGGAAGAG
1051 ACCGGAGTGG TGCTGTCCTT GGAGCAAACG GAGCAACACT CTCGCAGACC
1101 CATTCAAGGG GGGCCCCCTT CTCAGAAAGGA CACCCCTAAC CCTGGGGACA
1151 GCCTTGACAC CCCTGGCCCC CGGATCCTTG CCTTCCTGCA CCCGCCTTCC
1201 CTGAGCGAGG CTGCCCTGGC CGCTGACCCC CGCCGTTCT GCAGCCCTGA
1251 CCTCCGTCGC CTCCCTGGAC CCATCCTGGA TGGGGCTTCA GTAGCAGCCA
1301 CTCCCAGCAC CCCGCTGGCC ACACGGCACC CCCAAAGTCC TCTTCGGCT
1351 GATCTCCAG ATGAACCTACC TGTGGGCACC GAGAAATGTGC ACAGACTCTT
1401 CACCTCCGGG AAAGACACTG AGGCAGTGGA GACAGATTAA GATATAGCTC
1451 AGGATGCTGA TGCTCTGGAT TTGGAGATGC TGGCCCCCTA CATCTCCATG
1501 GATGATGACT TCCAGCTCAA CGCCAGCGAG CAGCTACCCA GGGCTTACCA
1551 CAGACCTCTG GGGGCTGTCC CCCGGCCCCG TGCTCGGAGC TTCCATGGCC
1601 TGTCACCTCC AGCCCTTGAG CCCTCCCTGC TACCCCGCTG GGGGAGTGAC
1651 CCCCGGCTGA GCTGCTCCAG CCCTTCCAGA GGGGACCCCT CAGCATCCTC
1701 TCCCAGGCT GGGGCTCGGA AGAGGACCC GGGCCAGAGC TCAGAGGAGC
1751 AGGACGAGGG AGTGGAGCTG CTGGGAGTGA GACCTCCCAA AAGGTCCCCC
1801 AGCCCAGAAC ACGAAAACCTT TCTGCTCTTT CCTCTCAGCC TGGTGTGTTG
1851 GGGGATTAAT GGGATTCTCT GGCCCTCATT ACCTAGCTGG CTTAACCTA
1901 CTGTTTTATA GATAGGAAAC CAGAGAGGGG CAGGGGCTGG TTGAGGGTCA
1951 TACAGAAAGT CAGTGGGCCA GCTGAGACTA AACGCTGATC TTCTAGTTTC
2001 ACTAATGGGT ATTAAAAACC TCTGCAGTGA ACTGAGATTG CGCCACTGCA
2051 CCCCAGCAGT AGCGACAGAA TGGGACCTTG TC

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Figure 15: SEQ ID NO. 9:
nucleotide sequence of
human HIF3alpha cDNA,
splice variant 5

Length: 2595 bp

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1 AACTCGCACC CGGGTCCTGG CTGCACCGCA TCCCCTCCGT CACCCCTGG
51 ATGGCCCTTC AGCCAACGGG GGCCTGGCG ATGGTCGACC ACGGAGCTGC
101 GCAAGGAAAA GTCCCGGGAT GCGGCCCGCA GCCGGCGCAG CCAGGAGACC
151 GAGGTGCTGT ACCAGCTGGC TCACACGCTG CCCTTCGCC GCGGCGTCAG
201 CGCCCCACCTG GACAAGGCCT CTATCATGCG CCTCACCATC AGCTACCTGC
251 GCATGCACCG CCTCTGCGCC GCAGGGGAGT GGAACCAGGT GGGAGCAGGG
301 GGAGAACACAC TGGATGCCTG CTACCTGAAG CCCCTGGAGG GCTTCGTCAT
351 GGTGCTCACC GCGGAGGGAG ACATGGCTTA CCTGTCGGAG AATGTCAGCA
401 AACACCTGGG CCTCAGTCAG CTGGAGCTCA TTGGACACAG CATCTTGAT
451 TTCATCCACC CCTGTGACCA AGAGGAGCTT CAGGACGCC TGACCCCCCA
501 GCAGACCTG TCCAGGAGGA AGGTGGAGGC CCCCACGGAG CGGTGCTTCT
551 CCTTGCACAT GAAGAGTACG CTCACCAAGCC GCGGGCGCAC CCTCAACCTC
601 AAGGCGGCCA CCTGGAAGGT GCTGAACCTGC TCTGGACATA TGAGGGCCTA
651 CAAGCCACCT GCGCAGACTT CTCCAGCTGG GAGCCCTGAC TCAGAGCCCC
701 CGCTGCAGTG CCTGGTGCTC ATCTGCGAAG CCATCCCCA CCCAGGCAGC
751 CTGGAGCCCC CACTGGGCCG AGGGGCCTTC CTCAGCCGCC ACAGCCTGGA
801 CATGAAGTTT ACCTACTGTG ACGACAGGAT TGCAGAAGTG GCTGGCTATA
851 GTCCCGATGAA CCTGATCGGC TGTTCCGCCT ACGAGTACAT CCACCGCCTG
901 GACTCCGACG CGGTCAAGCA GAGCATTCCAC ACCTTGCTGA GCAAGGGCCA
951 GGCAGTAACA GGGCAGTATC GCTTCCTGGC CCGGAGTGGT GGCTACCTGT
1001 GGACCCAGAC CCAGGCCACA GTGGTGTCAAG GGGGACGGGG CCCCCAGTCG
1051 GAGAGTATCG TCTGTGTCCA TTTTTTAATC AGCCAGGTGG AAGAGACCGG
1101 AGTGGTGCTG TCCCTGGAGC AAACGGAGCA ACACTCTCGC AGACCCATTG
1151 AGCGGGGGCGC CCCCTCTCAG AAGGACACCC CTAACCTGGG GGACAGCCTT
1201 GACACCCCTG GCCCCCGGAT CCTTGCTTC CTGCACCCGC CTTCCCTGAG
1251 CGAGGTGTCCT CGGGCGCTG ACCCCCCCGC TTTCTGCAGC CCTGACCTCC
1301 GTCGCCTCCT GGGACCCATC CTGGATGGGG CTTCACTGAGC AGCCACTCCC
1351 AGCACCCCGC TGGCCACACG GCACCCCCAA AGTCCTCTTT CGGCTGATCT
1401 CCCAGATGAA CTACCTGTGG GCACCGAGAA TGTGCACAGA CTCTTCACCT
1451 CCGGGAAAGA CACTGAGGCA GTGGAGACAG ATTAGATAT AGCTCAGGAT
1501 GCTGATGCTC TGGATTTGGA GATGCTGGCC CCCTACATCT CCATGGATGA
1551 TGACTTCCAG CTCAACGCCA GCGAGCAGCT ACCCAGGGCC TACCACAGAC
1601 CTCTGGGGC TGTCACCGG CCCCCTGCTC GGAGCTTCCA TGGCCTGTCA
1651 CCTCCAGCCC TTGAGCCCTC CCTGCTACCC CGCTGGGGGA GTGACCCCCG
1701 GCTGAGCTGC TCCAGCCCTT CCAGAGGGGA CCCCTCAGCA TCCTCTCCCA
1751 TGGCTGGGGC TCGGAAGAGG ACCCTGGCCC AGAGCTCAGA GGACGGAGAC
1801 GAGGGAGTGG AGCTGCTGGG AGTGAGACCT CCCAAAAGGT CCCCCAGCCC
1851 AGAACACGAA AACCTTCTGC TCTTCCTCT CAGCCTGAGT TTCCCTCTGA
1901 CAGGAGGACC AGCCCCAGGG AGCCTGCAGG ACCCCACTGA ACTTACCCAA
1951 TTCCCTCTTT CAGTCTTAAG TTTTCCATT CTAGACCCCT ACCCTCTAGG
2001 CTGTGCTGCT CCTGGACTTC ATGCCTCTCC ATTCTCATG CCTACAATCT
2051 CTGTGCCCA GAACCCCCCTC CACTtCCCAC CCCAGCCCTC CAGACATGCA
2101 CTTACCTTGA CTTTACCCCA CATGTTGGG GCACCTGGGG CTCCCTCACC

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2151 CCTTGGGTGG TTTGCAATCT GAAGACTTCT CCAGCCACAC AGGCACATGC
2201 ACAGGCACGG TGCTGTCCTGC ATATTGCCAG GTGGGGAGAG AAGCCAGGAC
2251 CCCTCAGCTG TCTGCCACCA TCTATGTGCC TCCCTTACCC CCCAGCTTTC
2301 TTTCTACAGA TGGTGCTACT CTTGGTCTCC CACAGGAAAA GGCCCTCCCCC
2351 CTTCTTAGCC CCATTTACCC CGTTTGTGGA AGGCACGTGCT CGCTCTGTTT
2401 TGTCAGAGAG TGGCCTATCC AGATTGGTGC TATGGGGGGG TCTGACCCCT
2451 CCCTCCTCCC TCTGGAGGTG ATGTGGGCC TCAATGGAGG GAATTGTGCT
2501 GGGCTAGGGA AAGGGGAGGG ACTAGACTGG CCACACTGGC TCTGAAACTC
2551 ACCAAtCTCT ATACACCATA AAGACCTCAC CTTGGTAGGC ACCAG

Fig. 16: SEQ ID NO. 10:
nucleotide sequence of human
HIF3alpha splice variant 1
coding sequence

Length: 1353 bp

1 ATGCGGGCCG CAGCCGGCGC AGCCAGGAGA CCGAGGTGCT GTACCAGCTG
51 GCTCACACGC TGCCCTTCGC CCGCGGCGTC AGCGCCCACC TGGACAAGGC
101 CTCTATCATG CGCCTCACCA TCAGCTACCT GCGCATGCAC CGCCTCTGCG
151 CCGCAGCTGG AGCTCATTGG ACACAGCATC TTTGATTCA TCCACCCCTG
201 TGACCCAAGAG GAGCTTCAGG ACGCCCTGAC CCCCCAGCAG ACCCTGTCCA
251 GGAGGAAGGT GGAGGGCCCC ACGGAGCGGT GCTTCTCCTT GCGCATGAAG
301 AGTACACTCA CCAGCCGGG CGGCACCCCTC AACCTCAAGG CGGCCACCTG
351 GAAGGTGCTG AACTGCTCTG GACATATGAG CCCCTACAAG CCACCTGCGC
401 AGACTTCTCC AGCTGGGAGC CCTGACTCAG AGCCCCCGCT GCAGTGCCTG
451 GTGCTCATCT GCGAACCCAT CCCCCACCCA GGCAAGCCTGG AGCCCCCACT
501 GGGCCGAGGG GCCTCCTCA GCCGCCACAG CCTGGACATG AAGTTCACCT
551 ACTGTGACGA CAGGATTGCA GAAGTGGCTG GCTATAGTCC CGATGACCTG
601 ATCGGCTGTT CCGCCTACGA GTACATCCAC GCGCTGGACT CCGATGCGGT
651 CAGCAAGAGC ATCCACACCT TGCTGAGCAA GGGCCAGGCA GTAACAGGGC
701 AGTATCGCTT CCTGGCCCGG AGTGGTGGCT ACCTGTGGAC CCAGACCCAG
751 GCCACAGTGG TGTCAAGGGG ACGGGGCCCC CAGTCGGAGA GTATCGTCTG
801 TGTCCATTTC TTAATCAGCC AGGTGGAAGA GACCGGAGTG GTGCTGTCCC
851 TGGAGCAAAC GGAGCAACAC TCTCGCAGAC CCATTCAAGG GGGCGCCCCC
901 TCTCAGAAGG ACACCCCTAA CCCTGGGAC AGCCTTGACA CCCCTGGCCC
951 CCGGATCCTT GCCTCCTGC ACCCGCCCTC CCTGAGCGAG GCTGCCCTGG
1001 CCGCTGACCC CCGCCGTTTC TGCAGCCCTG ACCTCCGTG CCTCCTGGGA
1051 CCCATCCTGG ATGGGGCTTC AGTAGCAGCC ACTCCCAGCA CCCCGCTGGC
1101 CACACGGCAC CCCCCAAAGTC CTCTTTCGGC TGATCTCCCA GATGAACTAC
1151 CTGTGGGCAC CGAGAAATGTG CACAGACTCT TCACCTCCGG GAAAGACACT
1201 GAGGCAGTGG AGACAGATT AGATATAAGCT CAGGACCCCA GCACCCCACT
1251 CCTGAACCTG AATGAGCCCC TGGGTTTCA CTTTGTCAACC CAGTCTGGAG
1301 TGCAGTGGCA CAAACACAGC TCACCGCAGC CTCGACCTCC TGGGCTCAAG
1351 TGA

Fig. 17: SEQ ID NO. 11:
nucleotide sequence of human
HIF3alpha splice variant 2
coding sequence

Length: 1029 bp

```
1  ATGGCGCTGG  GGCTGCAGCG  CGCAAGGTGCG  ACCACGGAGC  TGCAGCAAGGA
51  AAAGTCCCAGG  GATGCCGGCCC  GCAGCCGGCG  CAGCCAGGAG  ACCGAGGTGCG
101  TGTACCAGCT  GGCTCACACG  CTGCCCTTCG  CCCGCGGGCGT  CAGCGCCCAC
151  CTGGACAAAGG  CCTCTATCAT  GCGCCTCACCC  ATCAGCTACC  TGCGCATGCA
201  CCGCCTCTGC  GCCGCAGGGG  AGTGGAACCA  GGTGGGAGCA  GGGGGAGAAC
251  CACTGGATGC  CTGCTACCTG  AAGGCCCTGG  AGGGCTTCGT  CATGGTGCTC
301  ACCGCCGAGG  GAGACATGGC  TTACCTGTGCG  GAGAATGTCA  GCAAACACCT
351  GGGCCTCAGT  CAGCTGGAGC  TCATTGGACA  CAGCCTCTTT  GATTTCATCC
401  ACCCCTGTGA  CCAAGAGGAG  CTTCAGGACG  CCCTGACCCCC  CCAGCAGACC
451  CTGTCCAGGA  GGAAGGGTGG  GGCCCCCACG  GAGCGGGTGT  TCTCCTTGCG
501  CATGAAGAGT  ACGCTCACCA  GCCGCAGGGCG  CACCCCTCAAC  CTCAAGGCAGG
551  CCACCTGGAA  GGTGCTGAAC  TGCTCTGGAC  ATATGAGGGC  CTACAAGCCA
601  CCTGCGCAGA  CTTCTCCAGC  TGGGAGCCCT  GACTCAGAGC  CCCCGCTGCA
651  GTGCCTGGTG  CTCATCTGCG  AAGCCATCCC  CCACCCAGGC  AGCCTGGAGC
701  CCCCCACTGGG  CCGAGGGGCC  TTCCTCAGCC  GCCACAGCCT  GGACATGAAG
751  TTCACCTACT  GTGACCGACAG  GATTGCAGAA  GTGGCTGGCT  ATAGTCCCGA
801  TGACCTGATC  GGCTGTTCCG  CCTACGAGTA  CATCCACGGC  CTGGACTCCG
851  ACGCGGTCAG  CAAGAGCATC  CACACCTTGC  TGAGCAAGGG  CCAGGCAGTA
901  ACAGGGCAGT  ATCGCTTCCT  GGCCCGGAGT  GGTGGCTACC  TGTGGACCCA
951  GACCCAGGCC  ACAGTGGTGT  CAGGGGGACG  GGGCCCCCAG  TCGGAGAGTA
1001 TCGTCTGTGT  CCATTTTTA  ATCAGGTAA
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Fig. 18: SEQ ID NO. 12:
nucleotide sequence of human
HIF3alpha splice variant 3
coding sequence

Length: 1899 bp

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1  ATGGCGCTGG  GGCTGCAGCG  CGCAAGGTGCG  ACCACGGAGC  TGCAGCAAGGA
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101  TGTACCAGCT  GGCTCACACG  CTGCCCTTCG  CCCGCAGCGT  CAGCGCCAC
151  CTGGACAAGG  CCTCTATCAT  GCGCCTCACCC  ATCAGCTACC  TGCGCATGCA
201  CCGCCTCTGC  GCCGCAGGGG  AGTGGAAACCA  GGTGGGAGCA  GGGGGAGAAC
251  CACTGGATGC  CTGCTACCTG  AAGGCCCTGG  AGGGCTTCGT  CATGGTGCTC
301  ACCGCCGAGG  GAGACATGGC  TTACCTGTCG  GAGAATGTCA  GCAAACACCT
351  GGGCCTCAGT  CAGCTGGAGC  TCATTGGACA  CAGCATCTT  GATTTCATCC
401  ACCCCTGTGA  CCAAGAGGAG  CTTCAGGACG  CCCTGACCCC  CCAGCAGACC
451  CTGTCCAGGA  GGAAGGTGGA  GGCCCCCACG  GAGCGGTGCT  TCTCCTTGC
501  CATGAAGAGT  ACGCTCACCA  GCCGCAGGGCG  CACCCCTCAAC  CTCAAGGGCG
551  CCACCTGGAA  GGTGCTGAAC  TGCTCTGGAC  ATATGAGGGC  CTACAAGCCA
601  CCTGCGCAGA  CTTCTCCAGC  TGGGAGCCCT  GACTCAGAGC  CCCCCTGCA
651  GTGCCTGGTG  CTCATCTGCG  AAGCCATCCC  CCACCCAGGC  AGCCTGGAGC
701  CCCCACGGGG  CCGAGGGGCC  TTCCTCAGCC  GCCACAGCCT  GGACATGAAG
751  TTCACCTACT  GTGACGACAG  GATTGCAGAA  GTGGCTGGCT  ATAGTCCCGA
801  TGACCTGATC  CGCTGTTCCG  CCTACGAGTA  CATCCACGCG  CTGGACTCCG
851  ACGCGGTCAAG  CAAGAGCATC  CACACCTTGC  TGAGCAAGGG  CCAGGCAGTA
901  ACAGGGCAGT  ATCGCTTCCT  GGCCCGGAGT  GGTGGCTACC  TGTGGACCCA
951  GACCCAGGCC  ACAGTGGTGT  CAGGGGGACG  GGCCCCCAG  TCGGAGAGTA
1001  TCGCTCTGTGT  CCATTTTTA  ATCAGCCAGG  TGGAAAGAGAC  CGGAGTGGTG
1051  CTGTCCCTGG  AGCAAACGGA  GCAACACTCT  CGCAGACCCA  TTCAGCGGGG
1101  CGCCCCCTCT  CAGAAGGACA  CCCCTAACCC  TGGGGACAGC  CTTGACACCC
1151  CTGGCCCCCG  GATCCTTGCC  TTCCTGCACC  CGCCTTCCCT  GAGCGAGGCT
1201  GCCCTGGCCG  CTGACCCCCCG  CCGTTTCTGC  AGCCCTGACC  TCCGTCGCCT
1251  CCTGGGACCC  ATCCTGGATG  GGGCTTCAGT  AGCAGCCACT  CCCAGCACCC
1301  CGCTGGCCAC  ACGGCACCCC  CAAAGTCCTC  TTTCGGCTGA  TCTCCCAGAT
1351  GAACTACCTG  TGGGCACCGA  GAATGTGCAC  AGACTCTTCA  CCTCCGGGAA
1401  AGACACTGAG  GCAGTGGAGA  CAGATTAGA  TATAGCTCAG  GATGCTGATG
1451  CTCTGGATT  GGAGATGCTG  GCCCCCTACA  TCTCCATGGA  TGATGACTTC
1501  CAGCTCAACG  CCAGCGAGCA  GCTACCCAGG  GCCTACCCACA  GACCTCTGGG
1551  GGCTGTCCCC  CGGGCCCCGTG  CTCGGAGCTT  CCATGGCCCTG  TCACCTCCAG
1601  CCCTTGAGCC  CTCCCTGCTA  CCCCCCTGGG  GGAGTGACCC  CCGGCTGAGC
1651  TGCTCCAGCC  CTTCCAGAGG  GGACCCCTCA  GCATCCTCTC  CCATGGCTGG
1701  GGCTCGGAAG  AGGACCCCTGG  CCCAGAGCTC  AGAGGACGAG  GACGGAGGGAG
1751  TGGAGCTGCT  GGGAGTGAGA  CCTCCCCAAA  GGTCCCCCAG  CCCAGAACAC
1801  GAAAACTTTC  TGCTCTTCC  TCTCAGCCTG  GTGTGTTGGG  GGATTAATGG
1851  GATTCTCTGG  CCCTCATTAC  CTAGCTGGCT  TAAACCTACT  GTTTTATAG

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Fig. 19: SEQ ID NO. 13:
nucleotide sequence of human
HIF3alpha splice variant 5
coding sequence

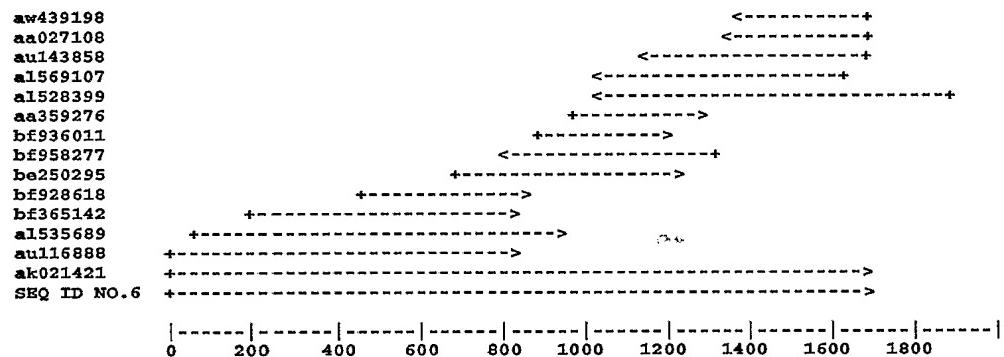
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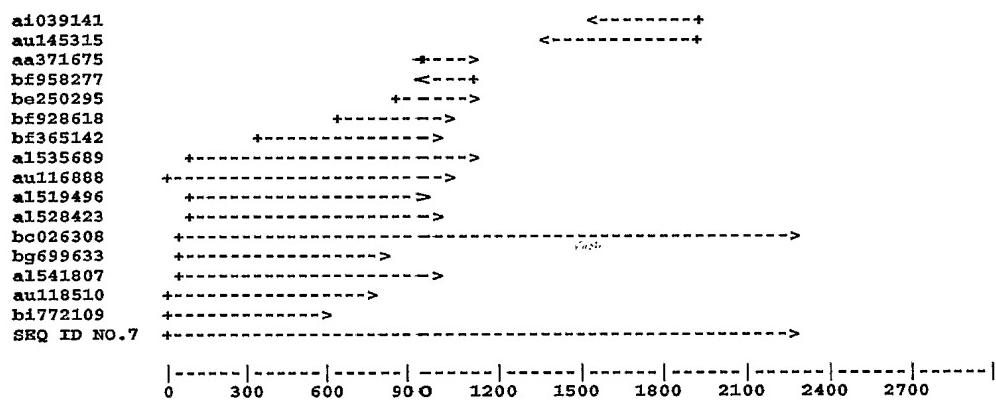
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51 GGAGTGGAAC CAGGTGGGAG CAGGGGGAGA ACCACTGGAT GCCTGCTACC
101 TGAAGGCCCT GGAGGGCTTC GTCTATGGTGC TCACCGCCGA GGGAGACATG
151 GCTTACCTGT CGGAGAAATGT CAGCAAACAC CTGGGCCTCA GTCAAGCTGGA
201 GCTCATTGGA CACAGCATCT TTGATTTCAT CCACCCCTGT GACCAAGAGG
251 AGCTTCAGGA CGCCCTGACC CCCCAGCAGA CCCTGTCCAG GAGGAAGGTG
301 GAGGCCCCCA CGGAGCGGTG CTTCTCCTTG CGCATGAAGA GTACGCTCAC
351 CAGCCGCGGG CGCACCCCTCA ACCTCAAGGC GGCCACCTGG AAGGTGCTGA
401 ACTGCTCTGG ACATATGAGG GCCTACAAGC CACCTGCGCA GACTTCTCCA
451 GCTGGGAGCC CTGACTCAGA GCCCCCCGCTG CAGTGCCTGG TGCTCATCTG
501 CGAACCCATC CCCCACCCAG GCAGCCTGGA GCCCCCCACTG GGCCGAGGGG
551 CCTTCCTCAG CGGCCACAGC CTGGACATGA AGTTCACCTA CTGTGACGAC
601 AGGATTGCAG AAGTGGCTGG CTATAGTCCC GATGACCTGA TCGGCTGTTG
651 CGCCTACGAG TACATCCACG CGCTGGACTC CGACGCGGTG AGCAAGAGCA
701 TCCACACCTT GCTGAGCAAG GGCCAGGCAG TAACAGGGCA GTATCGCTTC
751 CTGGCCCGGA GTGGTGGCTA CCTGTGGACC CAGACCCAGG CCACAGTGGT
801 GTCAGGGGGA CGGGGCCCCCG AGTCGGAGAG TATCGTCTGT GTCCATTGTT
851 TAATCAGCCA GGTGGAAGAG ACCGGAGTGG TGCTGTCCCT GGAGCAAACG
901 GAGCAACACT CTCGCAGACC CATTGAGCGG GGCGCCCCCT CTCAGAAGGA
951 CACCCCTAAC CCTGGGGACA GCCTGACAC CCCTGGCCCG CGGATCCTTG
1001 CCTTCCTGCA CCCGCCCTCC CTGAGCGAGG CTGCCCTGGC CGCTGACCCC
1051 CGCCGTTTCT GCAGCCCTGA CCTCCGTGCG CTCCCTGGGAC CCATCCTGGA
1101 TGGGGCTTCA GTAGCAGCCA CTCCCAGCAC CCCGCTGGGC ACACGGCACC
1151 CCCAAAGTCC TCTTCGGCT GATCTCCCAG ATGAACCTACC TGTGGGCACC
1201 GAGAATGTGC ACAGACTCTT CACCTCCGGG AAAGACACTG AGGCAGTGGA
1251 GACAGATTG AATAGCTC AGGATGCTGA TGCTCTGGAT TTGGAGATGTC
1301 TGGCCCCCTA CATCTCCATG GATGATGACT TCCAGCTCAA CGCCAGCGAG
1351 CAGCTACCCA GGGCCTACCA CAGACCTCTG GGGGCTGTCG CCCGGCCCCG
1401 TGCTCGGAGC TTCCATGGCC TGTCACCTCC AGCCCTTGAG CCCTCCCTGC
1451 TACCCCGCTG GGGGAGTGAC CCCCGGCTGA GCTGCTCCAG CCCTTCCAGA
1501 GGGGACCCCT CAGCATCCTC TCCCATGGCT GGGGCTCGGA AGAGGACCCCT
1551 GGCCAGAGC TCAGAGGACG AGGACGAGGG AGTGGAGCTG CTGGGAGTGA
1601 GACCTCCAA AAGTCCCCC AGCCAGAAC AGAAAACCT TCTGCTCTTT
1651 CCTCTCAGCC TGAGTTCCCT TCTGACAGGA GGACCAAGCCC CAGGGAGCCT
1701 GCAGGACCCC ACTGAACCTTA CCCAATTCTC TCTTCAGTC TTAAGTTTTC
1751 CCATTCTAGA CCCCTACCCCT CTAGGCTGTG CTGCTCCTGG ACTTCATGCC
1801 TCTCCATTCT CATTGCTAC AATCTCTGTG CCCCCAGAACCC CCCTCCACTT
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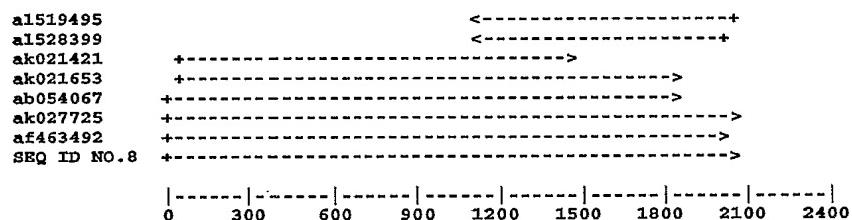
**Fig. 20: Schematic assembly of SEQ ID NO. 6,
with human ESTs and
human mRNA (AK021421)**



**Fig. 21: Schematic assembly of SEQ ID NO. 7,
with human ESTs and
human mRNA (BC026308)**



**Fig. 22: Schematic assembly of SEQ ID NO. 8,
with human ESTs and
human mRNAs (AK021421, AK021653,
AK027725, AB054067, AF463492)**



**Fig. 23: Schematic assembly of SEQ ID NO. 9,
with human ESTs and
human mRNA (AK021653)**

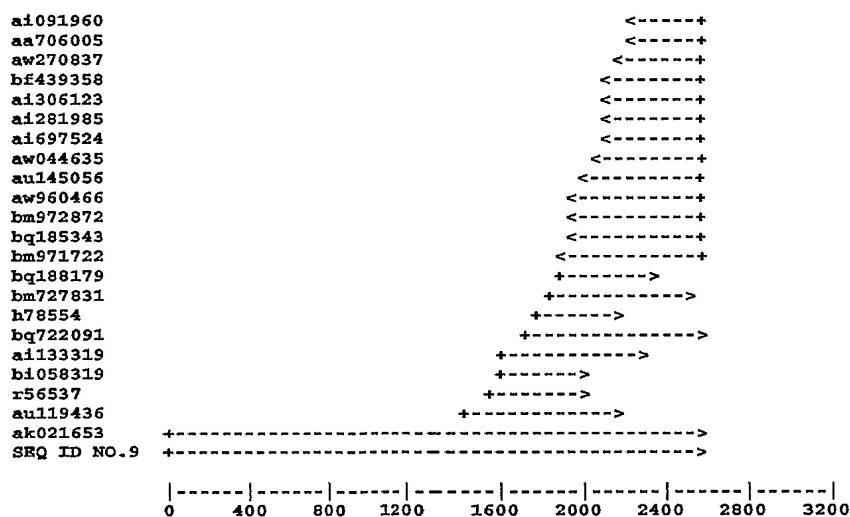


Fig. 24: Identification of differentially expressed genes by microarray hybridization

Biochip	Type of probe	Used probes (Cy5-/Cy3-labeled)	Ratio fluorescence intensity: temporal / frontal cortex
1	C	PT _{SSH(2)} / PF _{SSH(1)}	1.40
2	B	PT / PF	1.19
3	A	PT / PF	0.65
4	C	PT _{SSH(4)} / CT _{SSH(3)}	0.65
7	B	CF / PF	0.95

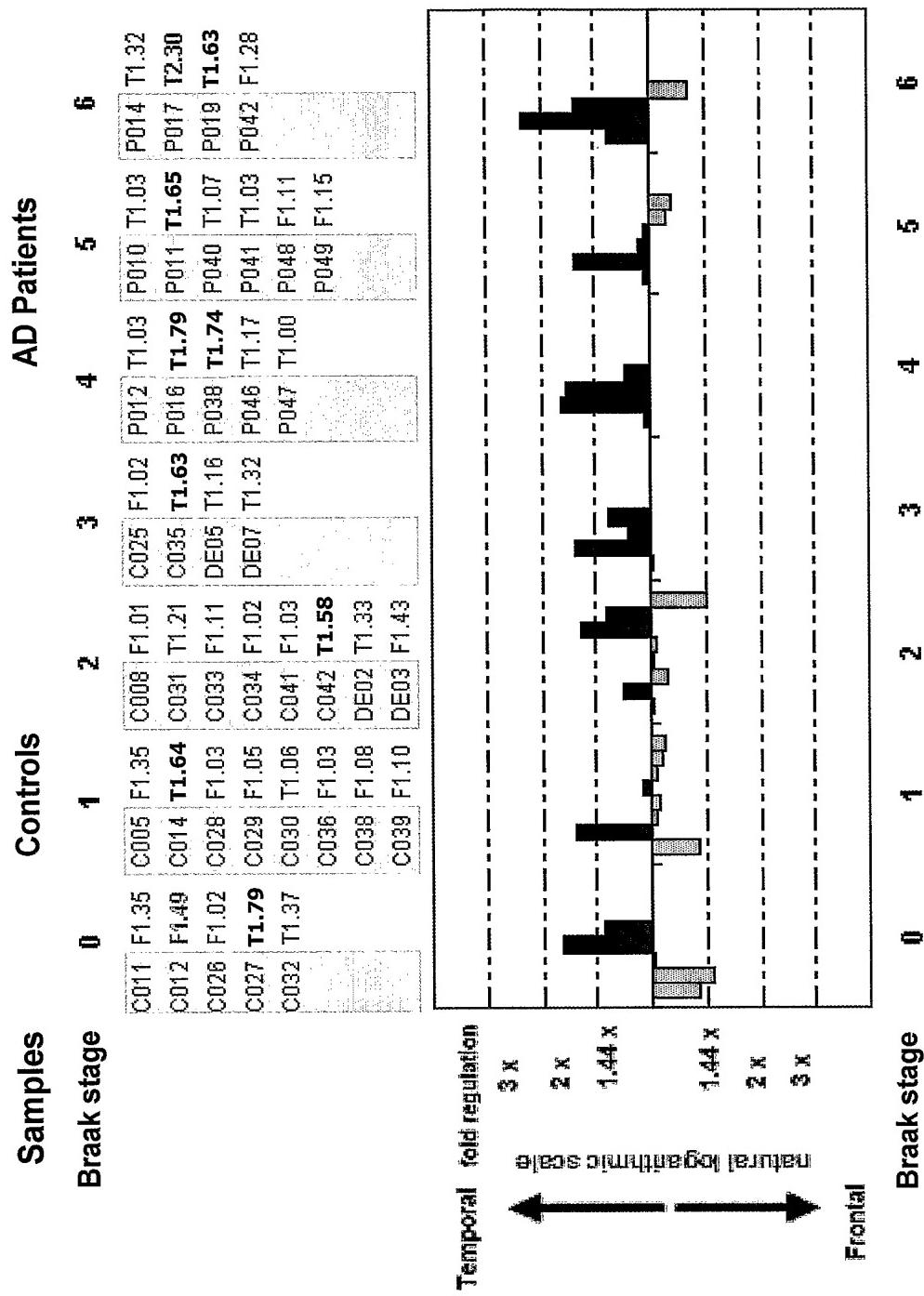
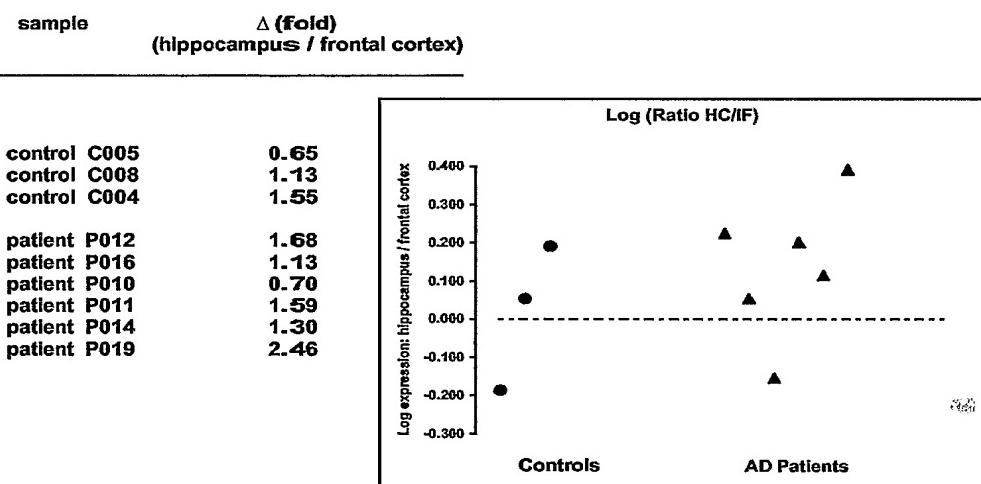
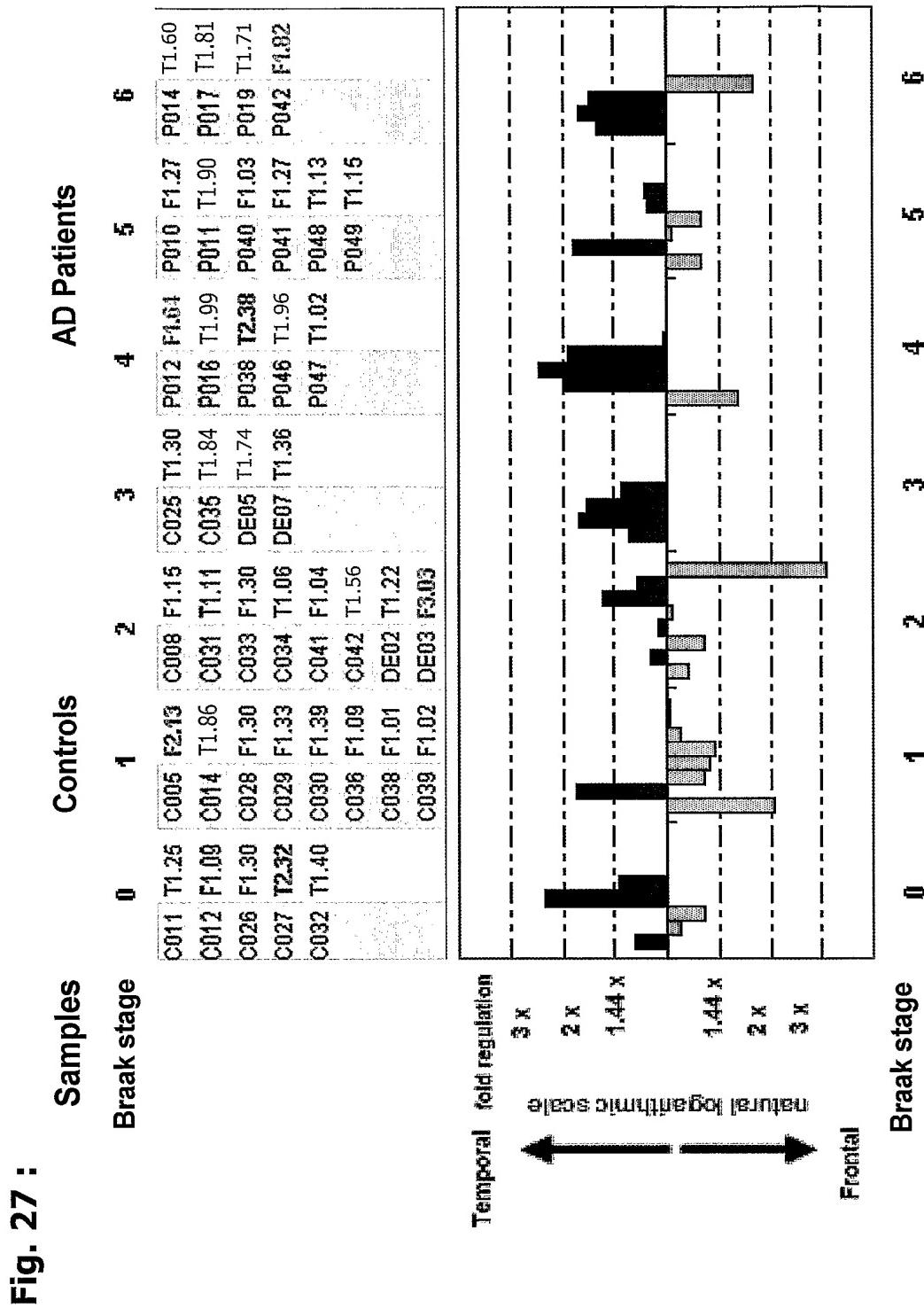
Fig. 25 :

Fig. 26 :



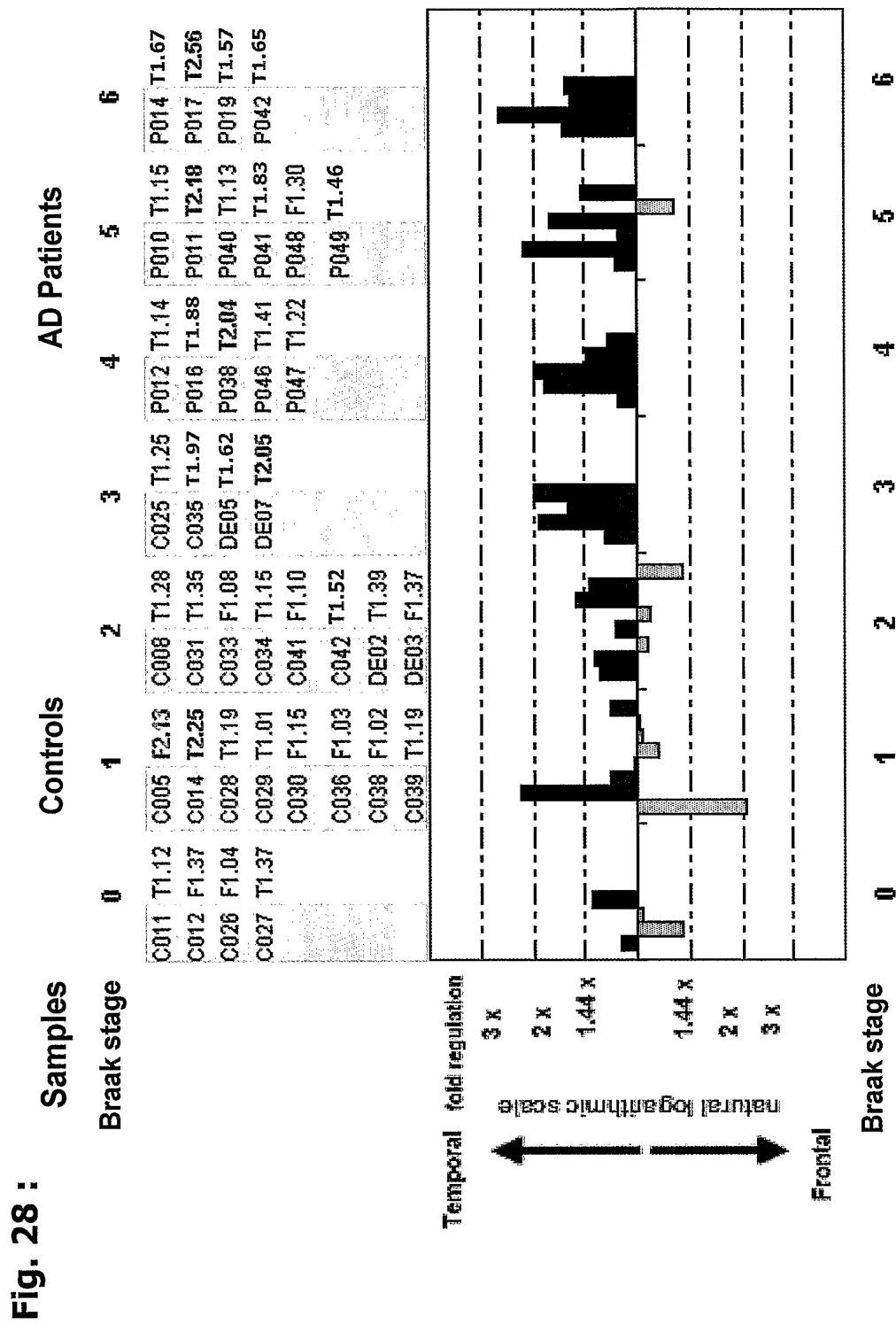


Fig. 29 :

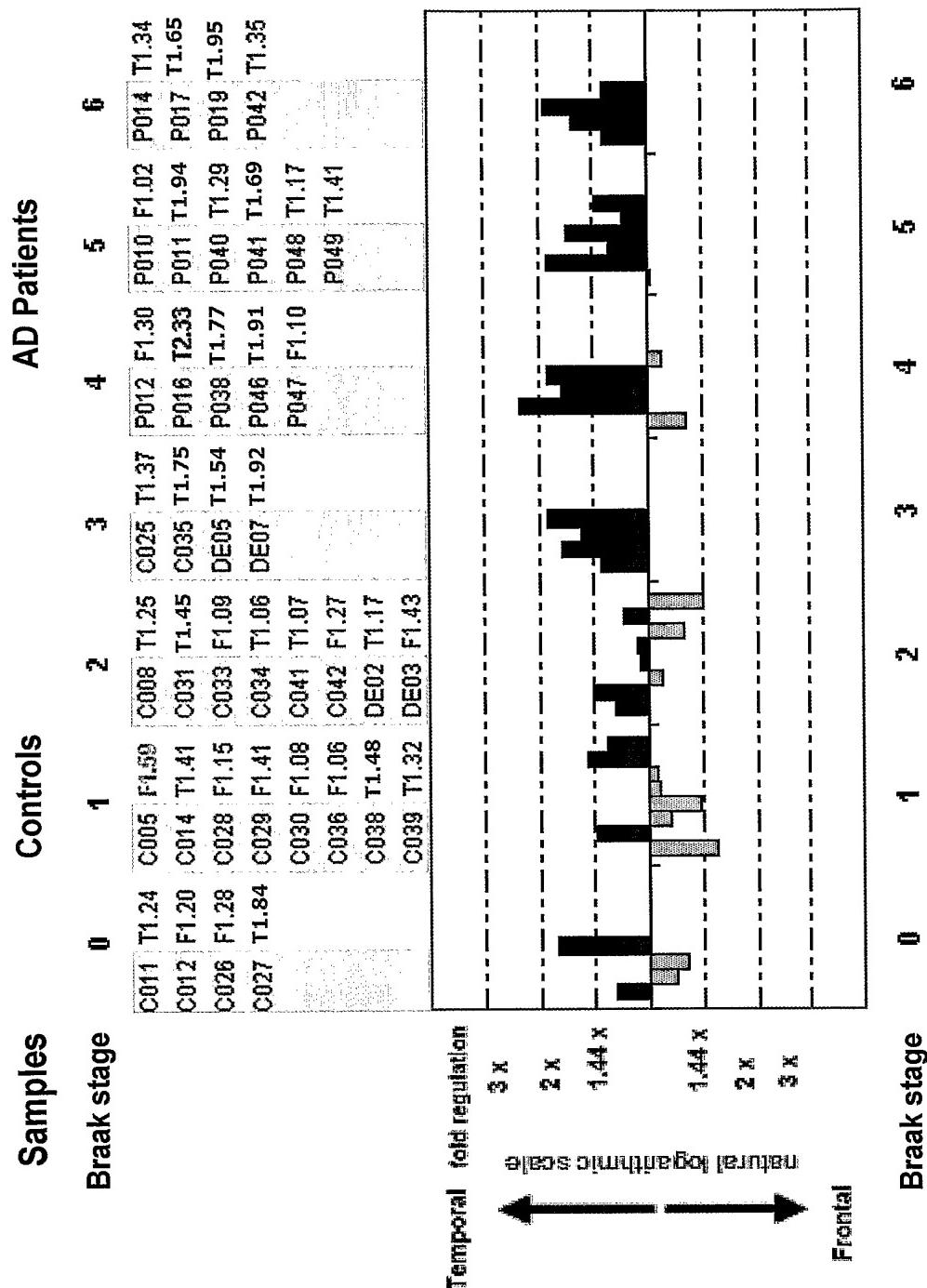


Fig. 30: Analysis of absolute mRNA expression of HIF3alpha splice variant 1

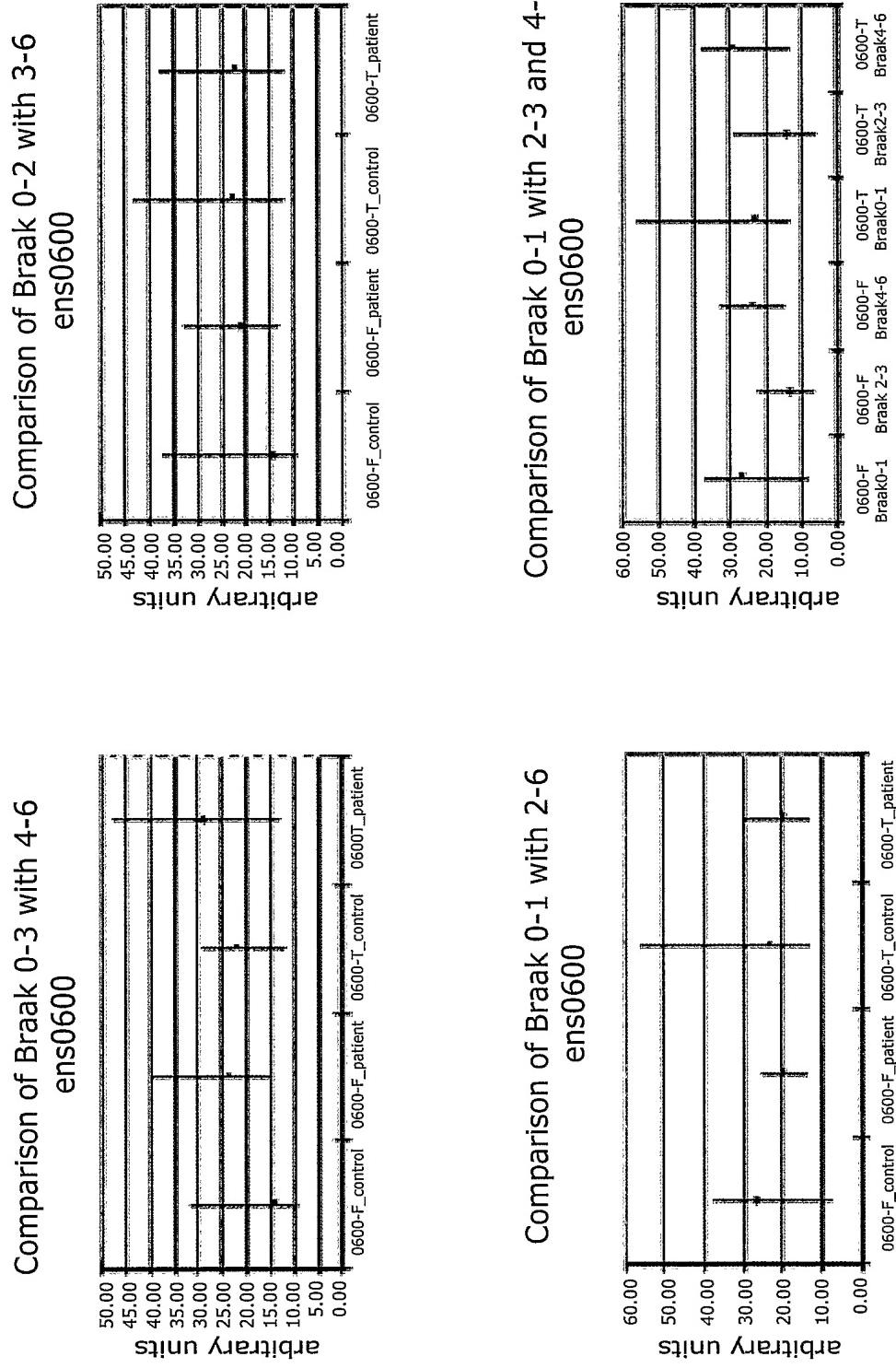
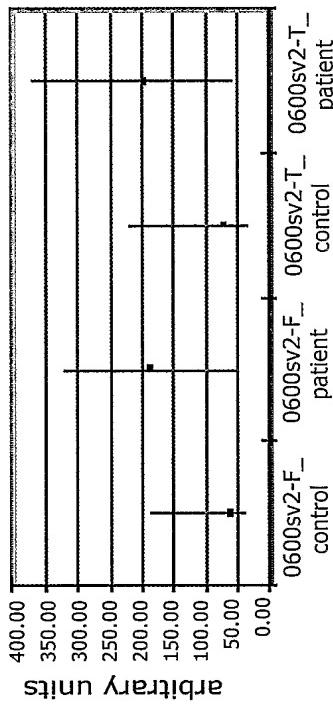
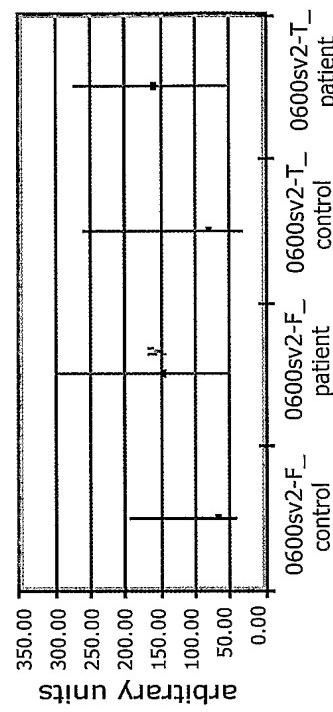


Fig. 31: Analysis of absolute mRNA expression of HIF3alpha splice variant 2

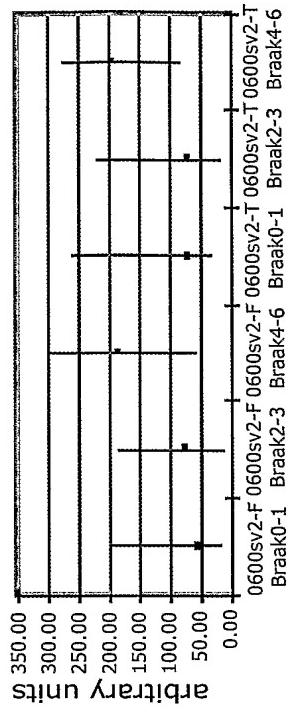
Comparison of Braak 0-3 with 4-6
ens0600sv2



Comparison of Braak 0-2 with 3-6
ens0600sv2



Comparison of Braak 0-1 with 2-3 and 4-6
ens0600sv2



Comparison of Braak 0-1 with 2-6
ens0600sv2

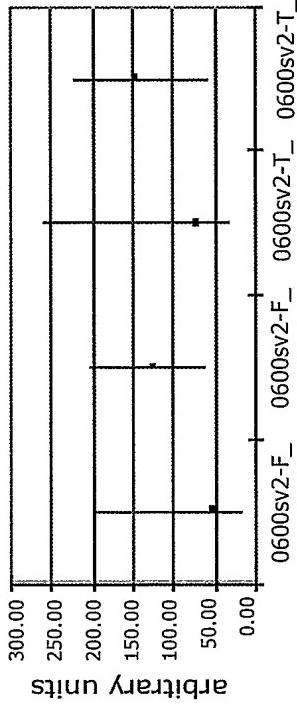


Fig. 32: Analysis of absolute mRNA expression of HIF3alpha splice variant 3

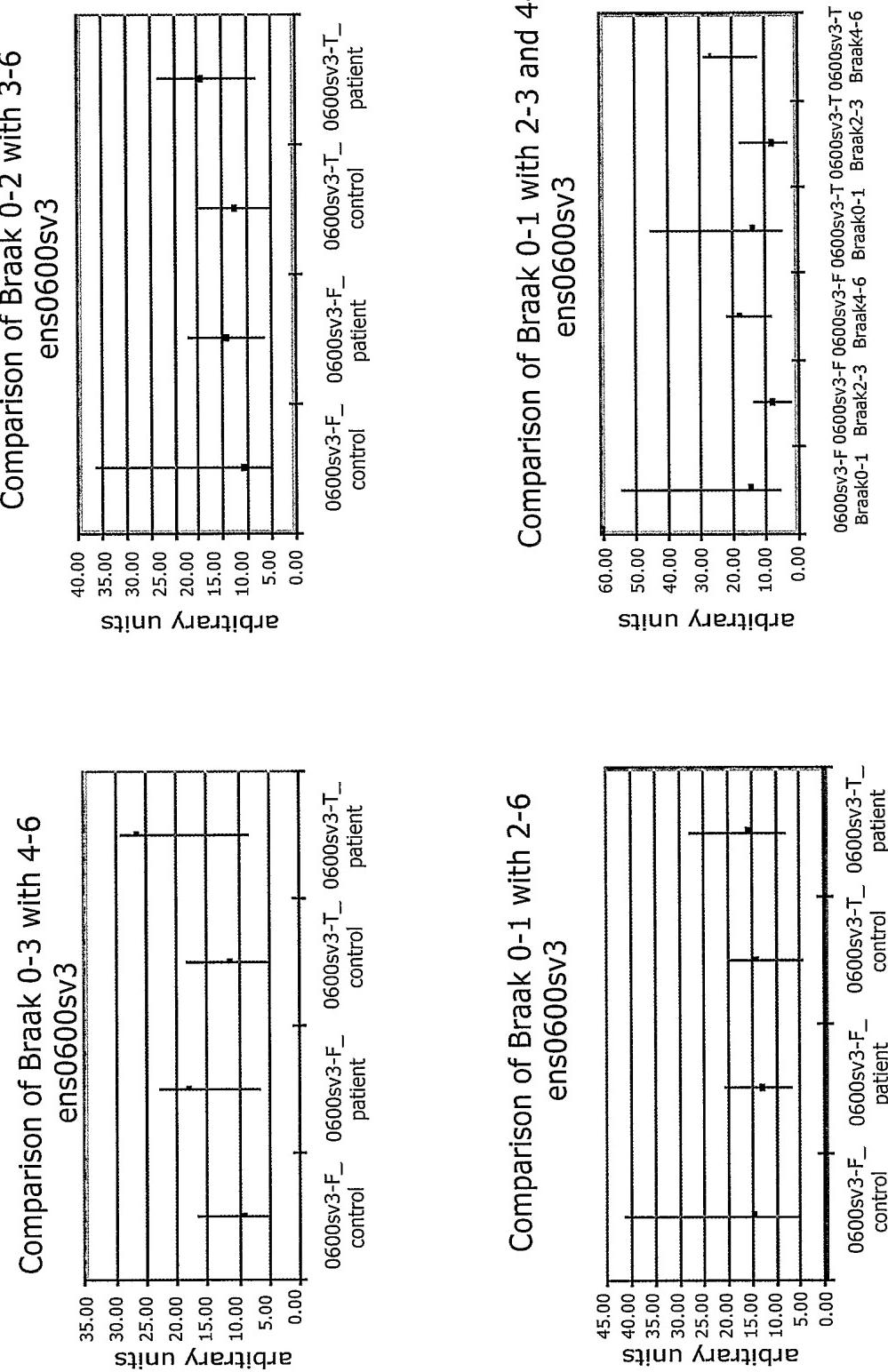


Fig. 33: Analysis of absolute mRNA expression of HIF3alpha splice variant 5

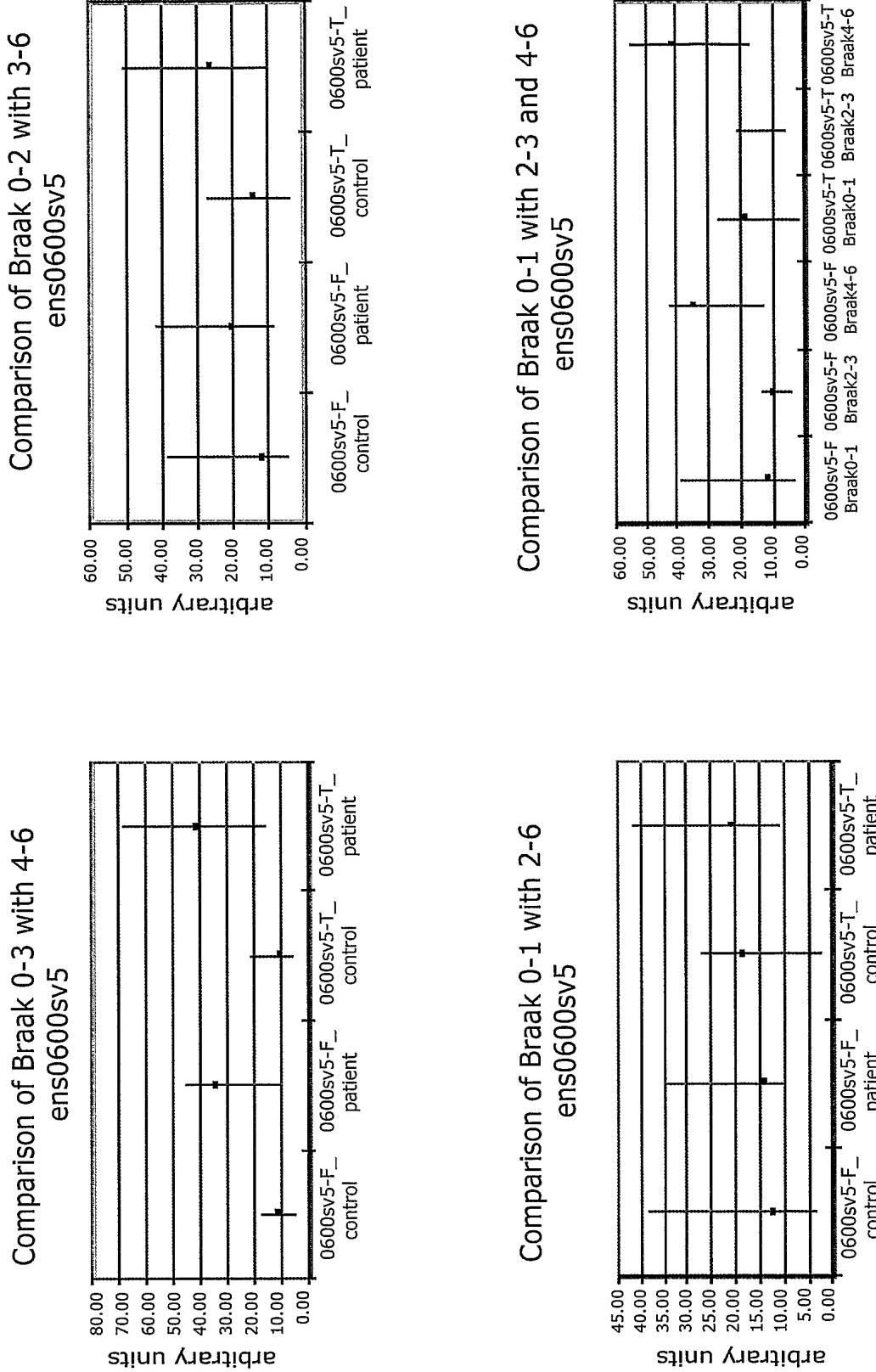
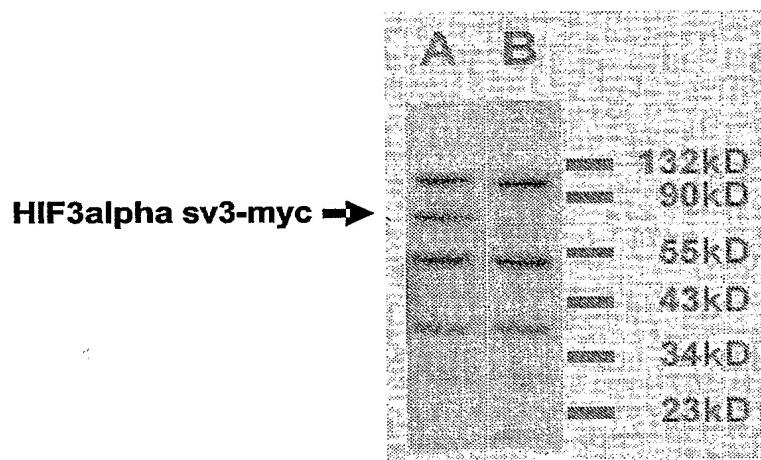


Fig. 34: Western Blot of H4APPsw cell protein extracts labeled with anti-HIF3alpha sv3-myc antibodies



**Fig. 35: Immunofluorescence analysis of
HIF3alpha sv3 protein in neuroglioma cells**

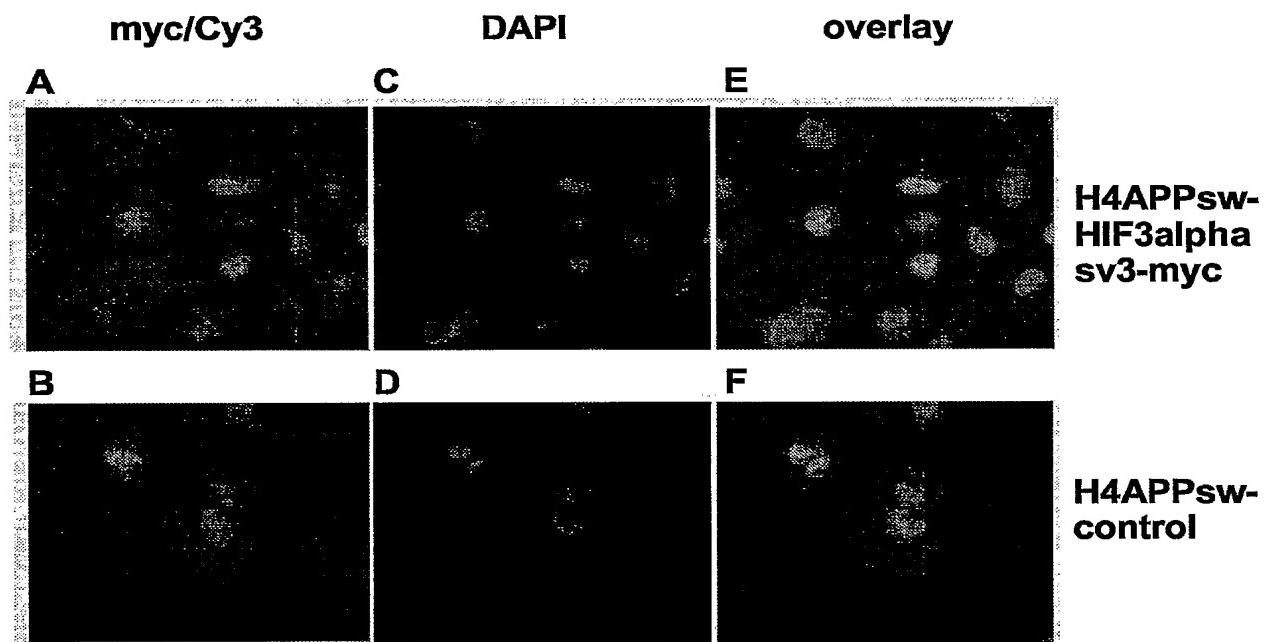


Fig. 36: Images of human brain sections labeled with anti-HIF3a antiserum, cell specific markers and DAPI

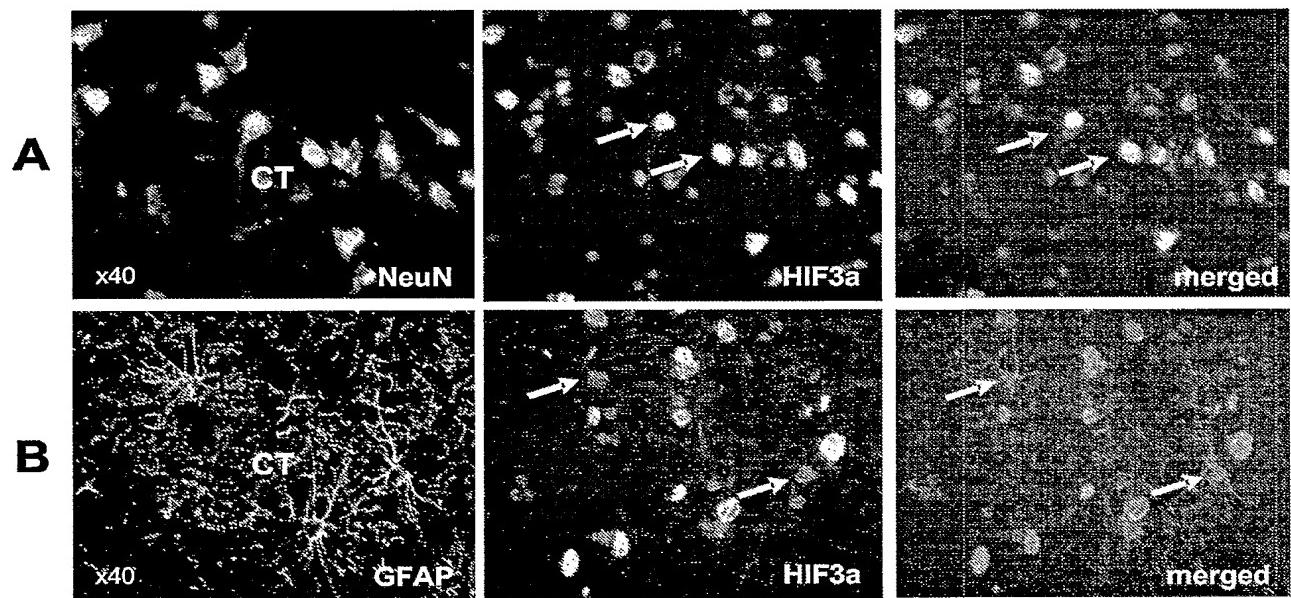
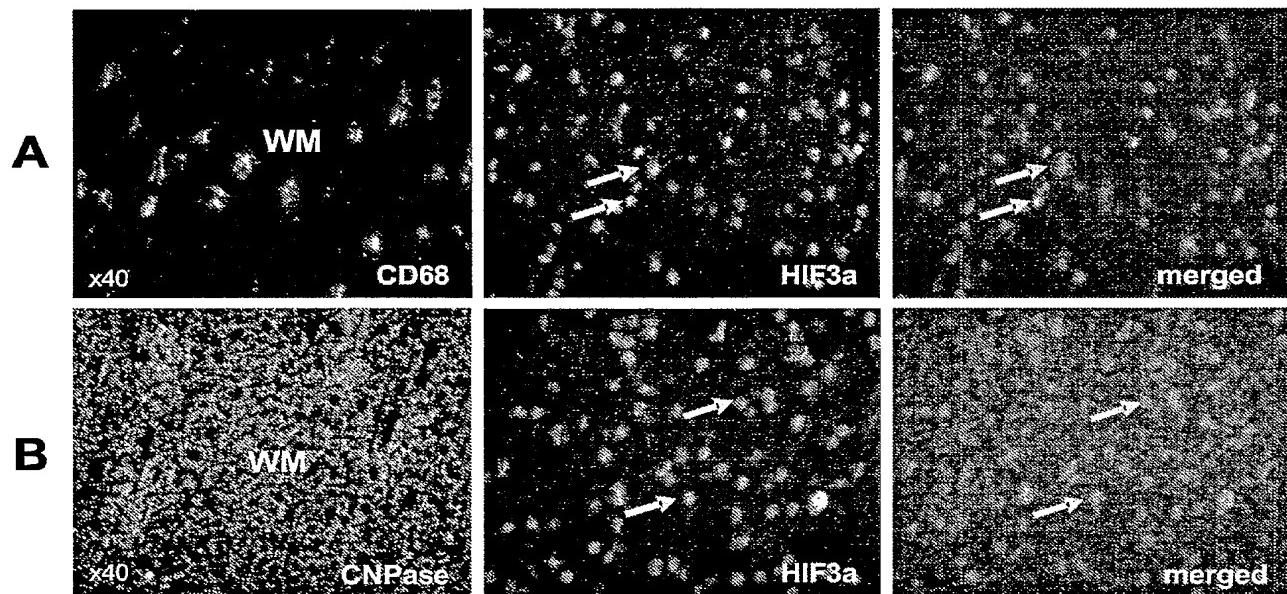


Fig. 37: Images of human brain sections labeled with anti-HIF3a antiserum, cell specific markers and DAPI



**Fig. 38 : Images of human brain sections labeled
with anti-HIF3a antiserum, GFAP and DAPI**

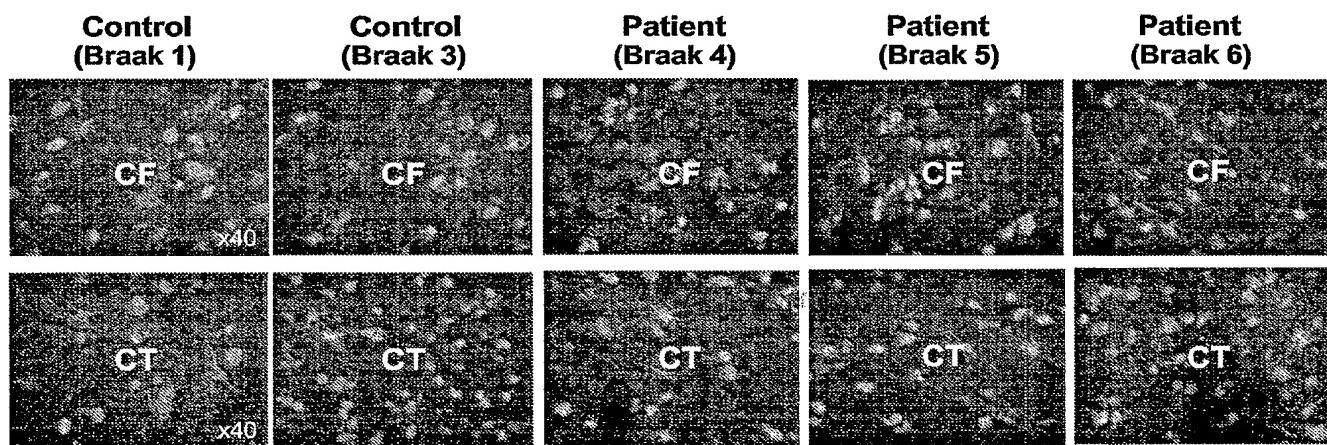


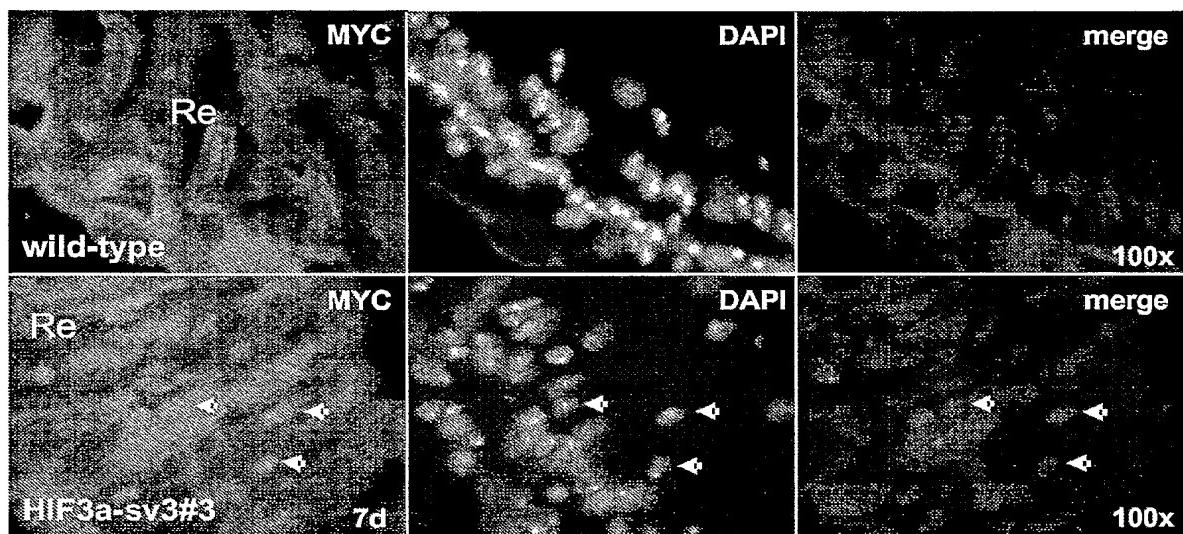
Fig. 39: Expression level of HIF3a sv3 expressing transgenic flies

name	cycle number	mean	stdev	error %	factor [normalization to rp49 cycle number]	mean*factor	difference	expression normalized to housekeeping gene and efficiency of HIF3a-sv3 primer	summary
HIF3a-sv3#3	30.03	30.237	0.2155	0.71265776	1	30.2366667			HIF3a-sv3#3 is 2.8 times higher expressed than HIF3a-sv3#4
HIF3a-sv3#3	30.22								
HIF3a-sv3#3	30.46								
HIF3a-sv3#4	30.96	31.160	0.1778	0.57048745	1.010625536	31.4910917	-1.25442502	-2.847544799	
HIF3a-sv3#4	31.22								
HIF3a-sv3#4	31.30								
HIF3a-sv3#57	27.84	27.953	0.1060	0.37915843	1.043347488	29.1650401	1.07162656	2.432592298	HIF3a-sv3#57 is 2.4 times higher expressed than HIF3a-sv3#3 and 5.3 times higher than HIF3a-sv3#4
HIF3a-sv3#57	27.97								
HIF3a-sv3#57	28.05					-2.32605158	-5.280137096		

E= $10^{(-1/\text{slope})}$ slope=-2.806 E=2.27 HIF3a-sv3 primer pair

name	rp49 cycle #	mean	stdev	error %	factor
HIF3a-sv3#3	19.63	19.657	0.0929	0.47269323	1
HIF3a-sv3#3	19.76				
HIF3a-sv3#3	19.68				
HIF3a-sv3#4	19.59	19.450	0.1929	0.99163504	1.010625536
HIF3a-sv3#4	19.23				
HIF3a-sv3#4	19.63				
HIF3a-sv3#57	18.97	18.840	0.1300	0.69002123	1.043347488
HIF3a-sv3#57	18.71				
HIF3a-sv3#57	18.84				

Fig. 40: Nuclear localization of HIF3a sv3 in transgenic Drosophila



**Fig. 41: HIF3a sv3 protein expression
in transgenic flies**

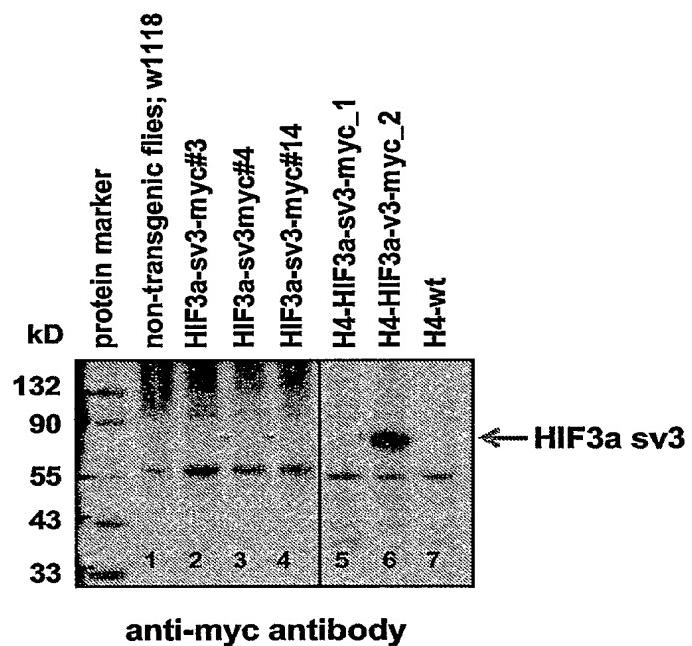


Fig. 42: HIF3a sv3 expression rescues photoreceptor cell degeneration

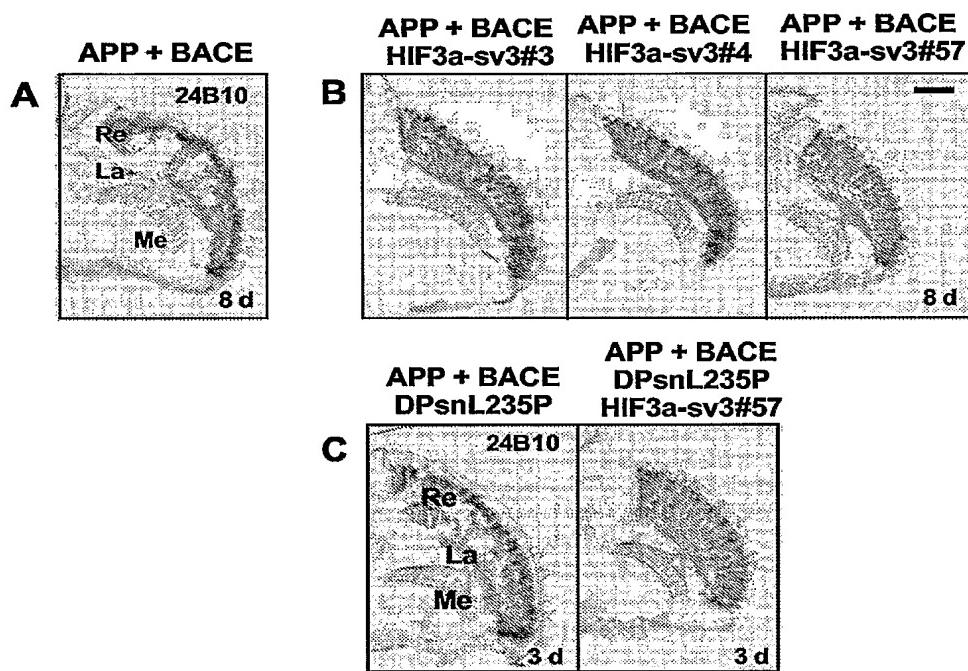


Fig. 43: Abeta level in hAPP/hBACE/HIF3a sv3 protein expressing flies

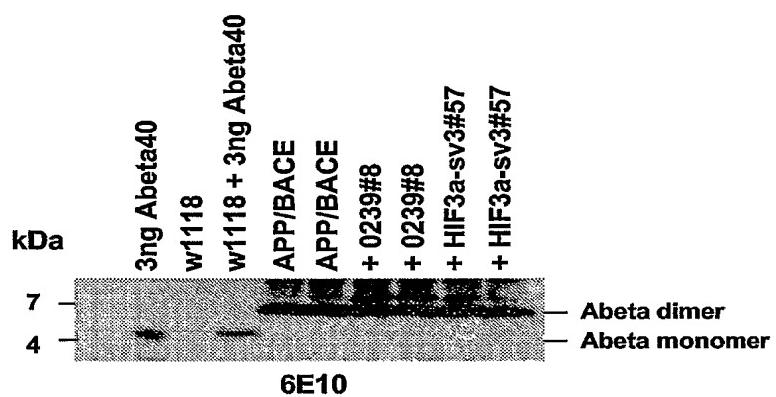


Fig. 44: Abeta plaque deposition in hAPP/hBACE/HIF3a sv3 expressing flies

